

#### Commonwealth of Virginia

#### VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE 4949-A Cox Road, Glen Allen, Virginia 23060 (804) 527-5020 FAX (804) 698-4178 www.deq.virginia.gov

Andrew R. Wheeler Secretary of Natural and Historic Resources Michael S. Rolband, PE, PWD, PWS Emeritus Director (804) 698-4020

> James J. Golden Regional Director

**DRAFT**, 2022

Mr. Brian Johnson Plant Manager Ashland Specialty Ingredients GP 1111 Hercules Road Hopewell, VA 23860

Location: Hopewell Registration No.: 50363

Dear Mr. Johnson:

Attached is a renewal Title V permit to operate your facility pursuant to 9VAC5 Chapter 80 Article 1 of the Virginia Regulations for the Control and Abatement of Air Pollution. The attached permit will be in effect beginning DRAFT, 2022.

In the course of evaluating the application and arriving at a final decision to issue this permit, the Department of Environmental Quality (DEQ) deemed the application complete on June 18, 2021 and solicited written public comments by placing a newspaper advertisement in the <u>Progress-Index</u> newspaper on February 18, 2022. The thirty-day required comment period, provided for in 9VAC5-80-270 expired on March 21, 2022.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and/or civil charges. Please read all permit conditions carefully.

This permit approval to operate shall not relieve Ashland Specialty Ingredients of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

Director Department of Environmental Quality P. O. Box 1105 Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact the regional office at (804) 527-5020.

Sincerely,

James J. Golden Regional Director

JJG/clm/50363-47 Ashland Inc. Title V Renewal

Attachment: Permit

cc: Chief, Air Enforcement Branch, U.S. EPA, Region III (electronic file submission)
Manager/Inspector, Air Compliance (electronic file submission)



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> James J. Golden Regional Director

# Federal Operating Permit Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9VAC5-80-50 through 9VAC5-80-300, of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee/Facility Name: Ashland Specialty Ingredients GP

Facility Location: 1111 Hercules Road

Hopewell, Virginia 23860

Registration Number: 50363
Permit Number: PRO50363

This permit includes the following programs:

Federally Enforceable Requirements - Clean Air Act (Pages 18 through 64)

DRAFT, 2022 Effective Date

DRAFT minus 1, 2027

**Expiration Date** 

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Regional Director

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#### **FACILITY INFORMATION**

## Permittee/Facility

Ashland Specialty Ingredients GP 1111 Hercules Road Hopewell, Virginia 23860

#### **Responsible Official**

Mr. Brian Johnson Plant Manager

#### **Contact Person**

Ashley Miller Environmental Engineer (804) 541-4399

County-Plant Identification Number: 51-670-0006

Facility Description: NAICS 321599 - Ashland Inc. owns and operates a manufacturing facility in Hopewell, Virginia. A variety of cellulose products used in the production of a wide range of consumer products and product packaging are manufactured at this facility.

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### **EMISSION UNITS**

Equipment to be operated consists of:

**Fuel Burning Equipment:** 

ruci burining	Equipment	1		T		ı	
Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
EG-AEU-001	EG-ACD-001	Emergency Diesel Engine- Generator (2016)	350 kW (530 hp)	N/A	N/A	N/A	N/A
WP-EAU-001	WP-ACD-001	Emergency Diesel Water Pump No. 1 (2004)	300 hp	N/A	N/A	N/A	N/A
WP-EAU-002	WP-ACD-002	Emergency Diesel Water Pump No. 2 (2004)	300 hp	N/A	N/A	N/A	N/A
WP-EAU-003	WP-ACD-003	Emergency Diesel Water Pump No. 3 (2004)	300 hp	N/A	N/A	N/A	N/A
WP-EAU-004	WP-ACD-004	Emergency Diesel Water Pump No. 4 (2004)	300 hp	N/A	N/A	N/A	N/A
WP-EAU-005	WP-ACD-005	Emergency Diesel Water Pump No. 5 (2004)	300 hp	N/A	N/A	N/A	N/A

Ashland Specialty Ingredients GP Permit Number: PRO50363 DRAFT, 2022 Page 3 of 64 Pages

Carboxymethyl Cellulose (CMC) Process Area:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
CM-AEU-001	CM-ACD-001	Primary Cutter #1		Cellulose Weigh Bin Baghouse	CM-ACD-001	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-002	CM-ACD-001	Secondary Cutter #1		Cellulose Weigh Bin Baghouse	CM-ACD-001	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-003	CM-ACD-001	Primary Cutter #2		Cellulose Weigh Bin Baghouse	CM-ACD-001	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-004	CM-ACD-001	Secondary Cutter #2		Cellulose Weigh Bin Baghouse	CM-ACD-001	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-005	CM-ACD-001	Primary Cutter #3		Cellulose Weigh Bin Baghouse	CM-ACD-001	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-006	CM-ACD-001	Secondary Cutter #3		Cellulose Weigh Bin Baghouse	CM-ACD-001	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-007	CM-ACD-001	Primary Cutter #4		Cellulose Weigh Bin Baghouse	CM-ACD-001	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-115	CM-ACD-001	Secondary Cutter #4		Cellulose Weigh Bin Baghouse	CM-ACD-001	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-008	N/A	Vent Intake Filters (4)		N/A	N/A	N/A	December 18, 2014
CM-ACD-002	CM-ACD-002	Cellulose Preparation Housekeeping Vacuum System		Cellulose Preparation Housekeeping Vacuum Baghouse	CM-ACD-002	PM/PM <sub>10</sub>	December 18, 2014
CM-ACD-003	CM-ACD-003	Cellulose Conveyance System including cyclone and zero point filter		Cellulose Conveyance System Zero Point Filter (ZPF)	CM-ACD-003	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-009	CM-ACD-009	Cellulose Conveyance System – Surge Bin		Cellulose Surge Bin Baghouse	CM-ACD-009	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-011	CM-ACD-005; CM-ACD-006	Alkali Cellulose Vessel	7,000 gallons	Alkali Cellulose Scrubber (loading); CMC Building Scrubber (all other periods)	CM-ACD-005; CM-ACD-006	VOC	December 18, 2014
CM-AEU-012	CM-ACD-005; CM-ACD-006	Alkali Cellulose Vessel	7,000 gallons	Alkali Cellulose Scrubber (loading); CMC Building Scrubber (all other periods)	CM-ACD-005; CM-ACD-006	VOC	December 18, 2014
CM-AEU-013	CM-ACD-005; CM-ACD-006	Alkali Cellulose Vessel	7,000 gallons	Alkali Cellulose Scrubber (loading); CMC Building Scrubber (all other periods)	CM-ACD-005; CM-ACD-006	VOC	December 18, 2014
CM-AEU-014	CM-ACD-005; CM-ACD-006	Pre-Mixers (2)		Alkali Cellulose Scrubber (loading); CMC Building Scrubber (all other periods)	CM-ACD-005; CM-ACD-006	VOC	December 18, 2014
CM-AEU-015	CM-ACD-006	Caustic/IPA Mix Tank		CMC Building Scrubber	CM-ACD-006	VOC	December 18, 2014
CM-AEU-016	CM-ACD-006	Caustic/IPA Mix Tank		CMC Building Scrubber	CM-ACD-006	VOC	December 18, 2014

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
CM-AEU-017	CM-ACD-004;	Reactor #1	7,000	Oxygen Scrubber (viscosity	CM-ACD-007;	VOC	December 18, 2014
	CM-ACD-006		gallons	reduction); CMC Building	CM-ACD-006		
				Scrubber (all other periods)			
CM-AEU-018	CM-ACD-004;	Reactor #2	7,000	Oxygen Scrubber (viscosity	CM-ACD-007;	VOC	December 18, 2014
	CM-ACD-006		gallons	reduction); CMC Building	CM-ACD-006		
				Scrubber (all other periods)			
CM-AEU-019	CM-ACD-004;	Reactor #3	7,000	Oxygen Scrubber (viscosity	CM-ACD-007;	VOC	December 18, 2014
	CM-ACD-006		gallons	reduction); CMC Building	CM-ACD-006		
				Scrubber (all other periods)			
CM-AEU-020	CM-ACD-006	Hold Tub		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-021	CM-ACD-006	Hold Tub		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-022	CM-ACD-006	Reslurry Tub		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-023	CM-ACD-006	Reslurry Tub		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-024	CM-ACD-006	Reslurry Tub		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-025	CM-ACD-006	Reslurry Tub		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-026	CM-ACD-006	Reslurry Tub		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-027	CM-ACD-006	Centrifuge		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-028	CM-ACD-006	Centrifuge		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-029	CM-ACD-006	Centrifuge		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-030	CM-ACD-006	Centrifuge		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-031	CM-ACD-006	Centrifuge		CMC Building Scrubber	CM-ACD-006	VOC/HAP	December 18, 2014
CM-AEU-032	CM-ACD-201	#3 Dryer		West Dryer Scrubber	CM-ACD-201	VOC/HAP	December 18, 2014
CM-AEU-033	CM-ACD-201	#4 Dryer		West Dryer Scrubber	CM-ACD-201	VOC/HAP	December 18, 2014
CM-AEU-036	CM-ACD-201	Dryer Centrifuge #5		West Dryer Scrubber	CM-ACD-201	VOC/HAP	December 18, 2014
CM-AEU-037	CM-ACD-201	Dryer Centrifuge #6		West Dryer Scrubber	CM-ACD-201	VOC/HAP	December 18, 2014
CM-AEU-038	CM-ACD-201	Blend Tub #5		West Dryer Scrubber	CM-ACD-201	VOC/HAP	December 18, 2014
CM-AEU-039	CM-ACD-201	Blend Tub #6		West Dryer Scrubber	CM-ACD-201	VOC/HAP	December 18, 2014
CM-AEU-040	CM-ACD-201	Blend Tub #7		West Dryer Scrubber	CM-ACD-201	VOC/HAP	December 18, 2014
CM-AEU-041	CM-ACD-201	Blend Tub #8		West Dryer Scrubber	CM-ACD-201	VOC/HAP	December 18, 2014
CM-AEU-047	CM-ACD-203	#5 Dryer		East Dryer Scrubber	CM-ACD-203	VOC/HAP	December 18, 2014
CM-AEU-048	CM-ACD-203	#6 Dryer		East Dryer Scrubber	CM-ACD-203	VOC/HAP	December 18, 2014
CM-AEU-051	CM-ACD-203	Dryer Centrifuge #7		East Dryer Scrubber	CM-ACD-203	VOC/HAP	December 18, 2014
CM-AEU-052	CM-ACD-203	Dryer Centrifuge #8		East Dryer Scrubber	CM-ACD-203	VOC/HAP	December 18, 2014
CM-AEU-053	CM-ACD-203	Blend Tub #9		East Dryer Scrubber	CM-ACD-203	VOC/HAP	December 18, 2014
CM-AEU-054	CM-ACD-203	Blend Tub #10		East Dryer Scrubber	CM-ACD-203	VOC/HAP	December 18, 2014
CM-AEU-	CM-ACD-301	Eight Dryer Storage Bins		Dryer Storage Bin Vent Filter	CM-ACD-301	PM/PM <sub>10</sub>	December 18, 2014
060-067		(#1 – #8)					

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
CM-AEU-068	CM-ACD-312	#1 Prescreener		#1 Mill Product Baghouse	CM-ACD-312	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-068	CM-ACD-312	#1 Mill System		#1 Mill Product Baghouse	CM-ACD-312	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-068	CM-ACD-312	#1 Mill Screener		#1 Mill Product Baghouse	CM-ACD-312	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-	CM-ACD-319	Six #1 Mill Blend Bins	30,000 lbs	Aspirator Baghouse	CM-ACD-319	PM/PM <sub>10</sub>	December 18, 2014
071-076			each				
CM-AEU-077	CM-ACD-313	#2 Prescreener		#2 Mill Product Baghouse	CM-ACD-313	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-078	CM-ACD-313	#2 Mill System		#2 Mill Product Baghouse	CM-ACD-313	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-079	CM-ACD-313	#2 Mill Screener		#2 Mill Product Baghouse	CM-ACD-313	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-	CM-ACD-319	Six #2 Mill Blend Bins	30,000 lbs	Aspirator Baghouse	CM-ACD-319	$PM/PM_{10}$	December 18, 2014
080-085			each				
CM-AEU-089	CM-ACD-314	Regrind Mill System		Regrind Mill Product Baghouse	CM-ACD-314	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-090	CM-ACD-314	Regrind Mill Screener		Regrind Mill Product Baghouse	CM-ACD-314	$PM/PM_{10}$	December 18, 2014
CM-AEU-091	CM-ACD-319	Regrind Mill Blend Bin	30,000 lbs	Aspirator Baghouse	CM-ACD-319	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-092	CM-ACD-319	Regrind Mill Blend Bin	30,000 lbs	Aspirator Baghouse	CM-ACD-319	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-093	CM-ACD-311	Addback Feed System		Regrind Mill Feed Baghouse	CM-ACD-311	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-094	CM-ACD-315	#1 Airmix Blender	40,000 lbs/hr	#1 AMB Baghouse	CM-ACD-315	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-095	CM-ACD-316	#2 Airmix Blender	40,000 lbs/hr	#2 AMB Baghouse	CM-ACD-316	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-096	CM-ACD-317	Custom Blender	10,000 lbs/hr	Custom Blender Baghouse	CM-ACD-317	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-097	N/A	Packaging System	15,000 lbs/hr	N/A	N/A	N/A	December 18, 2014
CM-ACD-318	CM-ACD-318	Packaging Housekeeping Vacuum System		Packaging Housekeeping Vacuum Baghouse	CM-ACD-318	PM/PM <sub>10</sub>	December 18, 2014
CM-AEU-098	CM-ACD-406	C-1 (A635) Distillation System (includes column C-3)	117,000 lbs/hr mixed solvent- water feed	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-AEU-109	CM-ACD-406	D-1 (A640) Distillation System	117,000 lbs/hr mixed solvent- water feed	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-AEU-110	CM-ACD-406	D-2 (A641) Distillation System	117,000 lbs/hr mixed solvent- water feed	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
CM-AEU-111	CM-ACD-008	MCA Dissolution Mix Tank	3000 gallons	MCA Sewer Scrubber	CM-ACD-008	VOC/HAP	December 18, 2014
CM-AEU-112	CM-ACD-008	MCA Dissolution Mix Tank	3000 gallons	MCA Sewer Scrubber	CM-ACD-008	VOC/HAP	December 18, 2014
CM-TNK-401	CM-ACD-400	MCA Storage Tank	7500 gallons	MCA Tank Scrubber	CM-ACD-400	VOC/HAP	December 18, 2014
CM-TNK-402	CM-ACD-400	MCA Storage Tank	10,000 gallons	MCA Tank Scrubber	CM-ACD-400	VOC/HAP	December 18, 2014
CM-TNK-403	CM-ACD-400	MCA Storage Tank	7500 gallons	MCA Tank Scrubber	CM-ACD-400	VOC/HAP	December 18, 2014
CM-TNK- 405a	N/A	Acetic Acid Storage Tank		N/A	N/A	VOC	September 24, 2010
CM-TNK-407	CM-ACD-406	Spent Methanol Tank	106,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-408	CM-ACD-406	Swing Tank		Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-409	CM-ACD-406	Spent Methanol Tank	200,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-410	CM-ACD-406	Spent Methanol Tank	18,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-411	CM-ACD-406	Spent Methanol Tank	18,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-412	CM-ACD-406	Spent Methanol Tank	12,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-413	CM-ACD-406	Reuse Methanol Tank	40,400 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-414	CM-ACD-406	Reuse Methanol Tank	40,400 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-415	CM-ACD-406	Reuse Methanol Tank	18,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-416	CM-ACD-406	Spent IPA Tank	150,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-417	CM-ACD-406	Reuse IPA Tank	18,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-418	CM-ACD-406	Reuse IPA Tank	21,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-419	CM-ACD-406	Reuse IPA Tank	18,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
CM-TNK-420	CM-ACD-406	Fresh Methanol Tank	150,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-421	CM-ACD-406	Brine Tank		Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-422	CM-ACD-406	Fresh IPA Tank	49,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
CM-TNK-423	CM-ACD-406	Fresh IPA Tank	49,000 gallons	Field Tank Scrubber	CM-ACD-406	VOC/HAP	December 18, 2014
MC-TNK-294	N/A	Acetic Acid Storage Tank (T-94)		N/A	N/A	N/A	N/A
MC-TNK-295	N/A	Acetic Acid Storage Tank (T-95)		N/A	N/A	N/A	N/A

**Hydroxyethyl Cellulose (Natrosol) Process Area:** 

Emission Unit ID	Stack ID	<b>Emission Unit Description</b>	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
NA-AEU-001	NA-ACD-001	#1 Primary Cutter	3,400 lbs/hr	Cellulose Weigh Bin Dust Collector (baghouse)	NA-ACD-001	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-002	NA-ACD-001	#1 Secondary Cutter	3,400 lbs/hr	Cellulose Weigh Bin Dust Collector (baghouse)	NA-ACD-001	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-003	NA-ACD-001	#2 Primary Cutter	3,400 lbs/hr	Cellulose Weigh Bin Dust Collector (baghouse)	NA-ACD-001	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-004	NA-ACD-001	#2 Secondary Cutter	3,400 lbs/hr	Cellulose Weigh Bin Dust Collector (baghouse)	NA-ACD-001	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-005	NA-ACD-001	#3 Primary Cutter	3,400 lbs/hr	Cellulose Weigh Bin Dust Collector (baghouse)	NA-ACD-001	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-006	NA-ACD-001	#3 Secondary Cutter	3,400 lbs/hr	Cellulose Weigh Bin Dust Collector (baghouse)	NA-ACD-001	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-007	NA-ACD-001	Herbold (or equivalent) Cutter	1,200 lbs/hr	Cellulose Weigh Bin Dust Collector (baghouse)	NA-ACD-001	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-008	NA-ACD-001	Herbold (or equivalent) Cutter	1,200 lbs/hr	Cellulose Weigh Bin Dust Collector (baghouse)	NA-ACD-001	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-011	NA-ACD-001	Cellulose Weigh Bin	830 ft <sup>3</sup>	Cellulose Weigh Bin Dust Collector (baghouse)	NA-ACD-001	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-012	NA-ACD-001	Cellulose Weigh Bin	830 ft <sup>3</sup>	Cellulose Weigh Bin Dust Collector (baghouse)	NA-ACD-001	PM/PM <sub>10</sub>	April 20, 2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
NA-AEU-013	NA-ACD-004	Intermediate Cellulose receiver	850 ft <sup>3</sup>	Intermediate Receiver Dust Collector (baghouse)	NA-ACD-004	PM/PM <sub>10</sub>	April 20, 2020
NA-ACD-002	NA-ACD-002	Cellulose Preparation Housekeeping Vacuum System		Cellulose Preparation Housekeeping Vacuum Dust Collector (baghouse)	NA-ACD-002	PM/PM <sub>10</sub>	April 20, 2020
NA-ACD-003	NA-ACD-003	Cellulose Reactor Conveyance System including two cyclones		Cellulose Reactor Conveyance System ZPF (baghouse)	NA-ACD-003	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-014	NA-ACD-101	Pre-Mixer #1		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-015	NA-ACD-101	Pre-Mixer #2		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-016	NA-ACD-101	#1 Reactor		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-017	NA-ACD-101	#2 Reactor		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-018	NA-ACD-101	#3 Reactor		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-019	NA-ACD-101	#4 Reactor		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-020	NA-ACD-101	#1 Hold Tub		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-021	NA-ACD-101	#2 Hold Tub		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-022	NA-ACD-101	#1 Caustic/TBA Mix Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-023	NA-ACD-101	#2 Caustic/TBA Mix Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-TNK-370	NA-AEE-027	Emergency Blow Tank		N/A	N/A	N/A	April 20, 2020
NA-AEU-024	NA-ACD-101	#1 TBA Centrifuge		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-025	NA-ACD-101	#2 TBA Centrifuge		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-026	NA-ACD-101	#1 Reslurry Tank	2,800 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-027	NA-ACD-101	#2 Reslurry Tank	2,800 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-028	NA-ACD-101	#3 Reslurry Tank	2,800 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-029	NA-ACD-101	#4 Reslurry Tank	3,800 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-031	NA-ACD-101	#5 Centrifuge		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-033	NA-ACD-101	Turbilizer		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-034	NA-ACD-101	Allis-Chalmers Washer and Crusher/Drag Chain System		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-035	NA-ACD-101	#1 Dump Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020

Emission Unit ID	Stack ID	<b>Emission Unit Description</b>	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
NA-AEU-036	NA-ACD-101	#2 Dump Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-037	NA-ACD-101	#6 Centrifuge		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-038	NA-ACD-101	#7 Centrifuge		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-040	NA-ACD-101	#2 Viscosity Reduction Vessel	3,800 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-041	NA-ACD-101	#3 Viscosity Reduction Vessel	3,800 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-042	NA-ACD-101	#4 Viscosity Reduction Vessel	3,800 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-045	NA-ACD-101	#3 Centrifuge		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-046	NA-ACD-101	#4 Centrifuge		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-047	NA-ACD-101	#1 Blend Tub	11,400 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-048	NA-ACD-101	#2 Blend Tub	11,400 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-049	NA-ACD-101	#3 Blend Tub	11,400 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-050	NA-ACD-101	#4 Blend Tub	11,400 gallons	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-051	NA-ACD-101	#1 Dryer	100,000 lbs/day	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-052	NA-ACD-101	#2 Dryer	(combined for #1 and #2 Dryers)	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-055	NA-ACD-101	#1 Condensate Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-AEU-060	NA-ACD-101	#2 Condensate Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC/HAP	April 20, 2020
NA-ACD-103	NA-ACD-103	Dryer Unloading Conveyance System including cyclone		Dryer Unloading Conveyance System ZPF (baghouse)	NA-ACD-103	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-066	NA-ACD- 201c	Screener #1 – South Mill System	7,000 lbs/hr	Netzch-Condux Grinding Mill (North) Dust Collector (baghouse)	NA-ACD- 201c	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-067	NA-ACD- 201b	Screener #2 – South Mill System	7,000 lbs/hr	Netzch-Condux Grinding Mill (South) Dust Collector (baghouse)	NA-ACD- 201b	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-068	NA-ACD- 201c	#1 Mill – South Mill System	7,000 lbs/hr	Netzch-Condux Grinding Mill (North) Dust Collector (baghouse)	NA-ACD- 201c	PM/PM <sub>10</sub>	April 20, 2020

Emission Unit ID	Stack ID	<b>Emission Unit Description</b>	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
NA-AEU-069	NA-ACD- 201b	#2 Mill – South Mill System	7,000 lbs/hr	Netzch-Condux Grinding Mill (South) Dust Collector (baghouse)	NA-ACD- 201b	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-070	NA-ACD- 202b	Screener #1 – East Mill System	7,000 lbs/hr	Bauermeister Grinding Mill Dust Collector (baghouse)	NA-ACD- 202b	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-071	NA-ACD- 202b	Screener #2 – East Mill System	7,000 lbs/hr	Bauermeister Grinding Mill Dust Collector (baghouse)	NA-ACD- 202b	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-072	NA-ACD- 202b	#1 Mill – East Mill System	7,000 lbs/hr	Bauermeister Grinding Mill Dust Collector (baghouse)	NA-ACD- 202b	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-073	NA-ACD- 202b	#2 Mill – East Mill System	7,000 lbs/hr	Bauermeister Grinding Mill Dust Collector (baghouse)	NA-ACD- 202b	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-080	NA-ACD-203; or NA-ACD-204	Six Blend Storage Bins (#1 - #6)		Blend Storage Bins Bottom Turnhead ZPF; Blend Storage Bins Top Turnhead ZPF (baghouses)	NA-ACD-203; or NA-ACD-204	PM/PM <sub>10</sub>	April 20, 2020
NA-ACD-205	NA-ACD-205	North (#1) Air Mix Blender Loading Cyclone		North (#1) Air Mix Blender Loading ZPF (baghouse)	NA-ACD-205	PM/PM <sub>10</sub>	April 20, 2020
NA-ACD-206	NA-ACD-206	South (#2) Air Mix Blender Loading Cyclone		South (#2) Air Mix Blender Loading ZPF (baghouse)	NA-ACD-206	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-081	NA-ACD-210	#1 Air Mix Blender (AMB)		#1 Air Mix Blender Dust Collector	NA-ACD-210	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-082	NA-ACD-211	#2 Air Mix Blender		#2 Air Mix Blender Dust Collector	NA-ACD-211	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-083	NA-ACD-213	AMB Weigh Bin #1		AMB Weigh Bin #1 (North) Bag Filter Breather (baghouse)	NA-ACD-213	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-084	NA-ACD-214	AMB Weigh Bin #2		AMB Weigh Bin #2 (South) Bag Filter Breather (baghouse)	NA-ACD-214	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-085	NA-ACD-215	AMB Weigh Bin #3		AMB Weigh Bin #3 (Southeast) Bag Filter Breather (baghouse)	NA-ACD-215	PM/PM <sub>10</sub>	April 20, 2020
NA-ACD-209	NA-ACD-209	Addback Hopper		Addback Hopper Dust Collector (baghouse)	NA-ACD-209	PM/PM <sub>10</sub>	April 20, 2020
NA-ACD-212	NA-ACD-212	Packaging Housekeeping Vacuum System		N/A	NA-ACD-212	PM/PM <sub>10</sub>	April 20, 2020
NA-AEU-100	NA-ACD-208	Packaging System	200,000 lbs/day	Air Mix Blender Unload to Packout ZPF (baghouse)	NA-ACD-208	PM/PM <sub>10</sub>	April 20, 2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
NA-AEU-086	NA-ACD-101	Distillation Column System A-670	21,000 gallons/hr solvent feed combined three columns	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-AEU-087	NA-ACD-101	Distillation Column System A-672	21,000 gallons/hr solvent feed combined three columns	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-AEU-088	NA-ACD-101	Distillation Column System A-673	21,000 gallons/hr solvent feed combined three columns	Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-AEU-095	NA-ACD-301	Three Ethylene Oxide Scale Tanks		EO/PO Emergency Scrubber	NA-ACD-301	VOC/HAP	April 20, 2020
NA-TNK-330	NA-ACD-301	Ethylene Oxide Storage/Transfer/ Inerting System		EO/PO Emergency Scrubber	NA-ACD-301	VOC/HAP	April 20, 2020
NA-TNK-341	NA-ACD-101	Spent TBA Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-TNK-342	NA-ACD-101	Fresh TBA Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-TNK-343	NA-ACD-101	Fresh TBA Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-TNK-347	NA-ACD-101	Reuse TBA Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-TNK-344	NA-ACD-101	Spent Acetone Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-TNK-348	NA-ACD-101	Reuse Acetone Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-TNK-349	NA-ACD-101	Reuse Acetone Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-TNK-345	NA-ACD-101	Weak Acetone Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-AEU-097	NA-AEU-097	Glyoxal Storage Tank		N/A	N/A	N/A	April 20, 2020
NA-AEU-101	NA-ACD-101	Centrifuge #8		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-AEU-102	NA-ACD-101	#2A Dump Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-AEU-103	NA-ACD-101	#3 Dump Tank		Natrosol Solvent Vent Scrubber	NA-ACD-101	VOC	April 20, 2020
NA-AEU-104	NA-ACD-102	Continuous Dryer		Natrosol Scrubber	NA-ACD-102	VOC	April 20, 2020
NA-AEU-105	NA-ACD-102	Continuous Dryer Centrifuge #1		Natrosol Scrubber	NA-ACD-102	VOC	April 20, 2020

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
NA-AEU-62	(NA-ACD-62a	Dryer Storage Bins (4)		Dryer Storage Bin Vents	NA-ACD-62a	PM/PM <sub>10</sub> /	April 20, 2020
through 65	through 65a)				through 65a	$PM_{2.5}$	
NA-AEU-110	NA-ACD-216	Silicon Bulk Bag System		Silicon Bulk Bag System	NA-ACD-216	PM/PM <sub>10</sub>	April 20, 2020
				Baghouse		$PM_{2.5}$	
NA-AEU-111	NA-ACD-	Conveyance System		Conveyance System Baghouse	NA-ACD-	PM/PM <sub>10</sub>	April 20, 2020
	103a	including cyclone			103a	$PM_{2.5}$	

Hydroxypropyl Cellulose (Klucel) Process Area:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
KL-AEU-001	KL-ACD-001	Cellulose Shredder #1 –		Klucel Cellulose Bin Fabric	KL-ACD-001	PM/PM <sub>10</sub>	March 20, 2019
		primary and secondary		Filter			
KL-AEU-002	KL-ACD-001	Cellulose Shredder #2 –		Klucel Cellulose Bin Fabric	KL-ACD-001	$PM/PM_{10}$	March 20, 2019
		primary and secondary		Filter			
KL-ACD-002	KL-ACD-002	Process Conveyance System		Process Conveyance System	KL-ACD-002	$PM/PM_{10}$	March 20, 2019
		including cyclone		ZPF (fabric filter)			
KL-AEU-003	KL-ACD-001	Condux Cutter		Klucel Cellulose Bin Fabric	KL-ACD-001	$PM/PM_{10}$	March 20, 2019
				Filter			
KL-AEU-004	KL-ACD-001	Cellulose Weigh Bin		Klucel Cellulose Bin Fabric	KL-ACD-001	$PM/PM_{10}$	March 20, 2019
				Filter			
KL-AEU-037	KL-ACD-001	Cellulose Shredder #3 –		Klucel Cellulose Bin Fabric	KL-ACD-001	$PM/PM_{10}$	March 20, 2019
		primary and secondary		Filter			
KL-AEU-005	KL-ACD-101	#2 Reactor and associated	6,600 gallons	Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
		feed and discharge systems					
KL-AEU-038	KL-ACD-101	#3 Reactor	6,600 gallons	Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-AEU-006	KL-ACD-102	Ambergum Mix Tank with	4,000 gallons	Venturi Scrubber	KL-ACD-102	VOC/HAP	March 20, 2019
		associated vacuum pump					
KL-AEU-007	KL-ACD-101	Purification Centrifuge #1		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-AEU-008	KL-ACD-101	Purification Centrifuge #2		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-AEU-009	KL-ACD-101	Purification Centrifuge #3		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-AEU-010	KL-ACD-101	Purification Wash Tub #1		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-AEU-011	KL-ACD-101	Purification Wash Tub #2		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-AEU-012	KL-ACD-101	Purification Wash Tub #3	5,300 gallons	Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-AEU-014	KL-ACD-103	Acetic Acid Head Tank and		Acetic Acid Scrubber	KL-ACD-103	VOC	March 20, 2019
		Transfer System					
KL-AEU-015	N/A	Dryer #1	42" x 60"	N/A	N/A	N/A	March 20, 2019

Emission Unit ID	Stack ID	<b>Emission Unit Description</b>	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
KL-AEU-016	N/A	Dryer #2	42" x 60"	N/A	N/A	N/A	March 20, 2019
KL-AEU-017	N/A	Dryer Feed Tub		N/A	N/A	N/A	March 20, 2019
KL-AEU-018	N/A	Dryer Centrifuge #1		N/A	N/A	N/A	March 20, 2019
KL-AEU-019	N/A	Dryer Centrifuge #2		N/A	N/A	N/A	March 20, 2019
KL-AEU-044	KL-ACD-101	Dryer Centrifuge #3		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-AEU-020	N/A	Shredder #1		N/A	N/A	N/A	March 20, 2019
KL-AEU-021	N/A	Shredder #2		N/A	N/A	N/A	March 20, 2019
KL-AEU-022	N/A	Shredder #3		N/A	N/A	N/A	March 20, 2019
KL-AEU-023	N/A	Shredder #4		N/A	N/A	N/A	March 20, 2019
KL-AEU-040	N/A	Dryer/Shredder Unit #5		N/A	N/A	N/A	March 20, 2019
KL-AEU-024	N/A	Mill #1		N/A	N/A	N/A	March 20, 2019
KL-AEU-025	N/A	Mill #2		N/A	N/A	N/A	March 20, 2019
KL-AEU-026	N/A	Mill #3		N/A	N/A	N/A	March 20, 2019
KL-AEU-027	N/A	Mill #4		N/A	N/A	N/A	March 20, 2019
KL-AEU-041	N/A	Mill #5		N/A	N/A	N/A	March 20, 2019
KL-AEU-028	KL-ACD-201A	Air Mix Blender #1		Blender Fabric Filter #1	KL-ACD- 201A	PM/PM <sub>10</sub>	March 20, 2019
KL-AEU-029	KL-ACD-201B	Air Mix Blender #2		Blender Fabric Filter #2	KL-ACD- 201B	PM/PM <sub>10</sub>	March 20, 2019
KL-AEU-030	KL-ACD-201C	Air Mix Blender #3		Blender Fabric Filter #3	KL-ACD- 201C	PM/PM <sub>10</sub>	March 20, 2019
KL-AEU-042	KL-ACD-201	Air Mix Blender #4		Blender Fabric Filter #4	KL-ACD- 201D	PM/PM <sub>10</sub>	March 20, 2019
KL-AEU-204	KL-ACD-201E	Fluidized mill grinder and product handling		Blender Fabric Filter #5	KL-ACD- 201E	PM/PM <sub>10</sub>	March 20, 2019
KL-AEU-031	KL-ACD-202	Automated Packaging System including one 50 cu. ft. fill hopper and associated conveyor	6,000 lbs/hr	Packaging/Addback Fabric Filter	KL-ACD-202	PM/PM <sub>10</sub>	March 20, 2019
KL-AEU-032	KL-ACD-202	Addback Hopper		Packaging/Addback Fabric Filter	KL-ACD-202	PM/PM <sub>10</sub>	March 20, 2019
KL-ACD-202	KL-ACD-202	KPR Process Vacuum System		Housekeeping Vacuum Fabric Filter	KL-ACD-202	PM/PM <sub>10</sub>	March 20, 2019
KL-ACD-203	KL-ACD-203	Housekeeping Vacuum System		Housekeeping Vacuum Fabric Filter	KL-ACD-203	PM/PM <sub>10</sub>	March 20, 2019
KL-AEU-033	KL-ACD-101	Separator		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019

Emission Unit ID	Stack ID	<b>Emission Unit Description</b>	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
KL-AEU-034	KL-ACD-101	Extraction Column and Feed Tank		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-AEU-035	KL-ACD-101	Distillation Column (A-671)	27 gallons/min	Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-AEU-036	KL-ACD-101	Product Cooler		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-TNK-306	KL-ACD-101	Extraction Feed Tank		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-TNK-307	KL-ACD-101	Fresh Heptane Tank (T-7)		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-TNK-337	KL-ACD-101	Fresh Heptane Tank (T-37)		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-TNK-308	KL-ACD-101	Fresh TBA Tank (T-8)		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-TNK-322	KL-ACD-101	Spent Solvent Tank (T-22)		Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
KL-TNK-309	KL-ACD-101	Distillation Feed Tank (T-9)	27,000	Klucel Process Scrubber	KL-ACD-101	VOC/HAP	March 20, 2019
			gallons				
KL-TNK-303	KL-TNK-303	Emergency Blow Tank		N/A	N/A	N/A	March 20, 2019
KL-TNK-363	KL-ACD-302	Propylene Oxide Storage Tank		EO/PO Emergency Scrubber	KL-ACD-302	VOC/HAP	March 20, 2019
KL-TNK-364	KL-ACD-302	Propylene Oxide Scale Tank		EO/PO Emergency Scrubber	KL-ACD-302	VOC/HAP	March 20, 2019
KL-AEU-039	KL-ACD-302	Pressure Bleed for PO Unloading / Storage / Transfer		EO/PO Emergency Scrubber	KL-ACD-302	VOC/HAP	March 20, 2019

# **Ethyl Cellulose (EC) Process Area:**

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
EC-AEU-001	EC-ACD-001	Cellulose Shredder #1		Cellulose Conveyance Cyclone	EC-ACD-001	PM/PM <sub>10</sub>	February 24, 2006
EC-AEU-003	EC-ACD-001	#11 Autoclave	4,700 gallons	Vent Scrubber System	EC-ACD-101	PM/PM <sub>10</sub>	February 24, 2006
EC-AEU-004	EC-ACD-001	#12 Autoclave	4,700 gallons	Vent Scrubber System	EC-ACD-101	$PM/PM_{10}$	February 24, 2006
EC-AEU-005	EC-ACD-001	#13 Autoclave	4,700 gallons	Vent Scrubber System	EC-ACD-101	PM/PM <sub>10</sub>	February 24, 2006
EC-AEU-006	N/A	Wetting Screw		N/A	N/A	N/A	February 24, 2006
EC-AEU-007	N/A	Loading Screw		N/A	N/A	N/A	February 24, 2006
EC-AEU-008	N/A	Leach Tub	3,000 gallons	N/A	N/A	N/A	February 24, 2006
EC-AEU-009	N/A	Leach Tub	3,000 gallons	N/A	N/A	N/A	February 24, 2006
EC-AEU-011	N/A	Wet Grinding Mill #2		N/A	N/A	N/A	February 24, 2006
EC-AEU-012	N/A	Wash Tub	3,000 gallons	N/A	N/A	N/A	February 24, 2006
EC-AEU-013	N/A	Wash Tub	3,000 gallons	N/A	N/A	N/A	February 24, 2006
EC-AEU-014	N/A	Wash Tub	3,000 gallons	N/A	N/A	N/A	February 24, 2006
EC-AEU-015	N/A	Centrifuge Feed Tubs		N/A	N/A	N/A	February 24, 2006

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
EC-AEU-016	N/A	Centrifuge #2		N/A	N/A	N/A	February 24, 2006
EC-AEU-017	N/A	Centrifuge #3		N/A	N/A	N/A	February 24, 2006
EC-AEU-018	EC-ACD-201	Vacuum Dryer #1		Wet Scrubber Vacuum Vent #1	EC-ACD-201	PM/PM <sub>10</sub>	February 24, 2006
EC-AEU-019	EC-ACD-206	Vacuum Dryer #2		Wet Scrubber Vacuum Vent #2	EC-ACD-206	PM/PM <sub>10</sub>	February 24, 2006
EC-AEU-020	EC-ACD-202	Screener System		Dryer Unloading ZPF (baghouse)	EC-ACD-202	PM/PM <sub>10</sub>	February 24, 2006
EC-AEU-021	EC-ACD-202	Milling System		Dryer Unloading ZPF (baghouse)	EC-ACD-202	PM/PM <sub>10</sub>	February 24, 2006
EC-AEU-022	EC-ACD-205	Air Mix Blender		Air Mix Blender ZPF (baghouse)	EC-ACD-205	PM/PM <sub>10</sub>	February 24, 2006
EC-AEU-023	EC-ACD-204	Packaging System		Packroom Vacuum Dust Collector (baghouse)	EC-ACD-204	PM/PM <sub>10</sub>	February 24, 2006
EC-AEU-024	EC-ACD-202	Tote Bin Unloading System		Dryer Unloading ZPF (baghouse)	EC-ACD-202	PM/PM <sub>10</sub>	February 24, 2006
EU-AEU-029	EC-ACD-101	Stripper Column		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EU-AEU-029	EC-ACD-101	Still Preheater		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EU-AEU-029	EC-ACD-101	Distillation Column		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EU-AEU-029	EC-ACD-101	Scrubber Feed Cooler #A		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-294	EC-TNK-294	Acetic Acid Storage Tank		N/A	N/A	N/A	February 24, 2006
EC-TNK-310	EC-ACD-101	Low Wine Feed Tank		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-315	EC-ACD-101	Low Wine Feed Tank		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-301	EC-ACD-101	Low Pressure Residue Tank		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-322	EC-ACD-101	Low Wine Storage Tank		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-325	EC-ACD-101	Low Wine Storage Tank		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-327	EC-ACD-101	Low Wine Storage Tank		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-345	EC-ACD-101	Low Wine High-Pressure Tank #1		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-346	EC-ACD-101	Low Wine High-Pressure Tank #2		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-326	EC-ACD-101	Ethyl Chloride Storage Tank		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-328	EC-ACD-101	Ethyl Chloride Storage Tank		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006
EC-TNK-348	EC-ACD-101	Ethyl Chloride Storage Tank		Vent Scrubber System	EC-ACD-101	VOC/HAP	February 24, 2006

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## **Technical Facility:**

Emission Unit ID	Stack ID	<b>Emission Unit Description</b>	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
TF-AEU-	TF-ACD-001	Pilot-Scale 10-gal Reactor		Process Scrubber	TF-ACD-001	VOC/HAP	December 7, 2009
001-004		Line					
TF-AEU-007	TF-ACD-001	Hold Tub		Process Scrubber	TF-ACD-001	VOC/HAP	December 7, 2009
TF-AEU-008	TF-ACD-001	Effluent Tub		Process Scrubber	TF-ACD-001	VOC/HAP	December 7, 2009
TF-AEU-009	TF-ACD-001	Purification Tub		Process Scrubber	TF-ACD-001	VOC/HAP	December 7, 2009
TF-AEU-010	TF-ACD-001	Mill		Process Scrubber	TF-ACD-001	VOC/HAP	December 7, 2009
TF-AEU- 015-017	TF-ACD-001	Three Pulverizers		Process Scrubber	TF-ACD-001	VOC/HAP	December 7, 2009
TF-AEU- 023-024	TF-ACD-001	Two Screeners		Process Scrubber	TF-ACD-001	VOC/HAP	December 7, 2009
TF-AEU-006	TF-ACD-001	250-gal Reactor		Process Scrubber	TF-ACD-001	VOC/HAP	December 7, 2009
TF-AEU- 011-012	TF-ACD-001	Two Dryers		Process Scrubber	TF-ACD-001	VOC/HAP	December 7, 2009
TF-AEU-013		Bepex Dryer		N/A	N/A	N/A	N/A
TF-AEU-014		Littleford Mixer		N/A	N/A	N/A	N/A
TF-TNK-510	TF-ACD-001	Acetone/Methanol Tank #1		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-TNK-520	TF-ACD-001	Acetone/Methanol Tank #2		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-TNK-530	TF-ACD-001	Isopropyl Alcohol Tank		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-TNK-540	TF-ACD-001	Methanol Tank		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-TNK-550	TF-ACD-001	Acetone Tank		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-TNK-560	TF-ACD-001	Distilled Solvent Tank		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-TNK-570	TF-ACD-001	Spent Solvent Tank		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-AEU-050	TF-ACD-001	West Dust Knockdown Pot		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-AEU- 013-016	TF-ACD-001	Four Mix Tanks		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-AEU-056	TF-ACD-001	Autoclave		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-AEU-005	TF-ACD-001	Blow Tank		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-AEU- 053-055	TF-ACD-001	Three Purification Vessels		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-AEU- 020-022	TF-ACD-001	Three Wash Tubs		Process Scrubber	TF-ACD-001	VOC/HAP	N/A
TF-AEU- 043-044	TF-ACD-001	Two EO/PO Storage Tanks		Process Scrubber	TF-ACD-001	VOC/HAP	N/A

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### **Waste Water Operations\*\*:**

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
WT-AEU-001	Fugitive	Neutralization/Containment		N/A	N/A	N/A	N/A
		Basin (CDLNS)					
WT-AEU-002	Fugitive	HEC/HPC Wet Well		N/A	N/A	N/A	N/A
WT-AEU-003	Fugitive	Main Lift Station		N/A	N/A	N/A	N/A
WT-AEU-004	Fugitive	Retention Basin		N/A	N/A	N/A	N/A
WT-AEU-005	Fugitive	Equalization Basin		N/A	N/A	N/A	N/A
WT-AEU-006	Fugitive	Purging Station to Hopewell		N/A	N/A	N/A	N/A
		Water Renewal					

<sup>\*</sup>The Size/Rated capacity and PCD efficiency is provided for informational purposes only, and is not an applicable requirement.

<sup>\*\*</sup>Wastewater operations are subject to recordkeeping requirements of 40 CFR 63, Subpart UUUU only.

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# PROCESS EQUIPMENT REQUIREMENTS – CARBOXYMETHYL CELLULOSE (CMC) PROCESS AREA

- 1. **CMC Process Area Limitations Emission Controls** Particulate matter and PM<sub>10</sub> emissions from the CMC process, including the two CMC cellulose weigh/storage bins (CM-ACD-001) shall be controlled by baghouses. Each fabric filter listed in Condition 8 shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The devices shall be installed in an accessible location and shall be maintained by the permittee such that they are in proper working order at all times. The baghouses shall be provided with adequate access for inspection. (9VAC5-80-110 and Condition 2 of the 12/18/14 NSR Permit)
- 2. **CMC Process Area Limitations Emission Controls** Volatile Organic Compound emissions from the CMC process solvent recovery system and subsequent wastewater streams shall be controlled by the following operating practices:
  - a. The installation and operation of a spiral heat exchanger on the bottom stream of the distillation column C-3; and
  - b. The installation and operation of limit switches on all automatic valves on the vent streams from the CMC distillation columns (Ref. Nos. C-1, D-1, and D-2).

The heat exchanger and automatic valve systems shall be provided with adequate access for inspection. (9 VAC 5-80-110 and Condition 3 of the 12/18/14 Permit)

3. **CMC Process Area – Limitations – Emission Controls** – Volatile Organic Compound emissions from the CMC Process Area point sources shall be controlled as indicated in the table below. Each scrubber listed below shall be equipped with a scrubber liquid flow meter. The flow meters shall be installed in an accessible location and shall be maintained by the permittee such that they are in proper working order at all times. The scrubbers shall be provided with adequate access for inspection and shall be in operation when any of the equipment is operating.

Emission/Process Unit	Control Device
Three Alkali Cellulose Vessels	Alkali Cellulose Scrubber – CM-ACD-005
(CM-AEU-011, 012, 013) during loading phase only	
Three Reactor Vessels	Oxygen Scrubber – CM-ACD-004
(CM-AEU-017, 018, 019) during loading phase only	

Emission/Process Unit	Control Device
Three Alkali Cellulose Vessels	CMC Building Scrubber – CM-ACD-006
(CM-AEU-011, 012, 013) during all phases except	
loading;	
Three Reactor Vessels	
(CM-AEU-017, 018, 019) during all phases except	
loading;	
Two Hold Tubs (CM-AEU-020, 021)	
Five Reslurry Tubs	
(CM-AEU-022, 023, 024, 025, 026)	
Five Purification Centrifuges	
(CM-AEU-027, 028, 029, 030, 031)	
Two Caustic/IPA Mix Tanks	
(CM- AEU-015, 016)	
CMC Dryer #3 (CM-AEU-032)	West Dryer Scrubber – CM-ACD-201
CMC Dryer #4 (CM-AEU-033)	
Four Blend Tubs	
(CM-AEU-038, 039, 040, 041)	
Two Drying Centrifuges	
(CM-AEU-036, 037)	
CMC Dryer #5 (CM-AEU-047)	East Dryer Scrubber – CM-ACD-203
CMC Dryer #6 (CM-AEU-048)	
Two Blend Tubs (CM-AEU-053, 054)	
Two Drying Centrifuges	
(CM-AEU-051, 052)	
Five Methanol Spent Tanks	Field Tank Scrubber – CM-ACD-406
(CM-TNK-407, 409, 410, 411, 412)	
Three Methanol Reuse Tanks	
(CM-TNK-413, 414, 415)	
Methanol Fresh Tank (CM-TNK-420)	
IPA Spent Tank (CM-TNK-416)	
Three IPA Reuse Tanks	
(CM-TNK-417, 418, 419)	
Two IPA Fresh Tanks (CM-TNK-421, 422)	
Three Distillation Columns	
(CM-AEU-098, 109, 110)	
Three MCA Storage Tanks	MCA Tank Scrubber – CM-ACD-400
(CM-TNK-401, 402, 403)	
Two MCA Mix Tanks	MCA Scrubber – ACD-008
(CM-AEU-111, CM-AEU-112)	

(9 VAC 5-80-110 and Condition 4 of the 12/18/14 NSR Permit)

4. **CMC Process Area – Limitations – VOC Work Practice Standards** – At all times the disposal of volatile organic compounds shall be accomplished by taking measures to the extent practicable, consistent with air pollution control practices for minimizing emissions. Volatile organic compounds shall not be intentionally spilled, discarded in sewers which are not connected to a treatment plant, or stored in open

containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution practices for minimizing emissions.

(9 VAC 5-80-110 and Condition 6 of the 12/18/14 NSR Permit)

5. **CMC Process Area – Limitations – Emission Standard** – VOC emissions from the CMC Process Area shall be controlled by the use of solvent recovery and process scrubbers having an overall VOC control efficiency of at least 99% on a mass basis, calculated monthly as a six-month rolling average. Compliance with this requirement shall be demonstrated by material balance according to the following equation:

$$\sum_{i=1}^{i=6} (V_T - V_A)_i / \sum_{i=1}^{i=6} (V_T)_i \times 100 \ge 99\%$$

where:

V<sub>T</sub> = mass of VOC (in pounds) circulated/used through the process area during a onemonth period, as calculated from measured flow and VOC concentration of still output

V<sub>A</sub> = mass of VOC (in pounds) lost to the air from point, nonpoint and fugitive sources, which cannot be accounted for as other losses (including but not limited to reaction consumption, recycle/recovery, product retention, sewer loss, product transfer and salt/acetone formation), as determined by material balance, using the equation:

$$V_A = V_{I,OSS} - V_{OTHER}$$

where:

V<sub>LOSS</sub> = mass of final inventory from current month, minus mass of starting inventory from current month, minus mass of solvent purchased in the current 1-month period (as determined from purchase records and cost sheets which show changes in inventory)

 $V_{OTHER} = \max$  of non-air VOC losses which include but are not limited to: reaction consumption, recycle/recovery, product retention, sewer loss, product transfer and salt/acetone formation

- i = month number one through month number six of the 6-month rolling average
- a. Sewer losses shall be calculated based on continuous flow-weighted composite samples of wastewater and physical flow measurements.
- b. Product residual losses shall be determined from previous sampling and product-specific data on solvent remaining in the product as it leaves the plant.
- c. At least once each semi-annual period, the permittee shall conduct a 7-day sampling and analysis evaluation to verify the salt conversion factor mass balance correction. At the conclusion of each

evaluation, the permittee shall adjust the salt conversion factors, for future use, as necessary to incorporate the results of the evaluation. Within 45 days of the completion of each evaluation, the permittee shall submit a report to the Piedmont Regional Office. Each report shall include the results of the evaluation and any adjustment to the salt conversion factors. After the completion of four such evaluations, the permittee may petition DEQ to reduce or eliminate these periodic evaluations. Results of the compliance calculation shall be reported to the Virginia Department of Environmental Quality annually, and records will be maintained for a period of at least five years.

(9VAC5-80-110, Conditions E.5 and E.13 of the 7/12/96 RACT Agreement and Condition 8 of the 12/18/14 NSR Permit)

- 6. **CMC Process Area Limitations Production** The production of CMC from the CMC Process Area shall not exceed 53,000,000 lb/yr, calculated monthly as the sum of the previous consecutive 12 month period.
  - (9 VAC 5-80-110 and Condition 7 of the 12/18/14 Permit)
- 7. **CMC Process Area Limitations Emission Limits** Emissions from the operation of the CMC process shall not exceed the limits specified below, calculated monthly as the sum of the previous consecutive 12 month period:

Volatile Organic Compounds

422 tons/yr

(9 VAC 5-80-110 and Condition 9 of the 12/18/14 NSR Permit)

8. **CMC Process Area – Limitations – Emission Limits** – Particulate Matter and PM<sub>10</sub> emissions from the operation of the CMC shredding and packaging operations, as exhausted through the baghouses listed below, shall not exceed the following limits:

Reference No.	Description	lb/hr	tons/yr
CM-ACD-001	Cellulose Prep Area (Shredders/Storage	0.4	1.4
	Bins)		
CM-ACD-002	Cellulose Prep Area (Shredders/Storage	0.5	2.0
	Bins)		
CM-ACD-009	Cellulose Prep Area (Cellulose Surge	0.5	2.0
	Bin)		
CM-ACD-309	#1 Mill Feed Baghouse	0.2	0.9
CM-ACD-310	#2 Mill Feed Baghouse	0.2	0.9
CM-ACD-311	Regrind Mill Feed Dust Baghouse	0.2	0.9
CM-ACD-312	#1 Mill Feed Product Dust Baghouse	0.5	2.0
CM-ACD-313	#2 Mill Feed Product Dust Baghouse	0.5	2.0
CM-ACD-314	Regrind Mill Product Baghouse	0.5	2.0
CM-ACD-315	#1 Blender Baghouse (Convey)	0.3	0.5
CM-ACD-315	#1 Blender Baghouse (Pulse)	0.6	0.5
CM-ACD-316	#2 Blender Baghouse (Convey)	0.3	0.5
CM-ACD-316	#2 Blender Baghouse (Pulse)	0.6	0.5
CM-ACD-317	Custom Blender Dust Collector	0.3	0.5

Reference No.	Description	lb/hr	tons/yr
CM-ACD-318	Vacuum Baghouse Dust Collector	0.1	0.5
CM-ACD-319	Aspirator Dust Collector	0.2	0.8
CMC-ACD-301	Dryer Storage Bin Vent Filters	0.1	0.5
through			
CMC-ACD-308			
	Totala	60	10 /

**Totals** 6.0 18.4

(9 VAC 5-80-110 and Condition 10 of the 12/18/14 Permit)

- 9. **CMC Process Area Limitations Visible Emission Limit** Visible emissions from the CMC Process Area baghouses shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction. (9 VAC 5-80-110 and Condition 11 of the 12/18/14 Permit)
- 10. **CMC Process Area Limitations Operating Limits** The permittee shall maintain the daily average scrubber pressure drop and scrubber liquid flow rate within the values in this Condition. The permittee shall collect the scrubber pressure drop and scrubber liquid flow rate data according to §63.5545, reducing the scrubber parameter data to daily averages, and maintaining the daily scrubber parameter values within the range of values in this Condition. This permit may be administratively amended to change the values upon approval of a newer compliance demonstration.

Control Device	Daily Average Operating Limit
CM-ACD-006	Liquid Flow: $\geq$ 6.7 gallons per minute
	Pressure Drop: ≤ 10.0" WC
CM-ACD-005	Liquid Flow: $\geq 2.3$ gallons per minute
	Pressure Drop: ≤ 10.0" WC
CM-ACD-004	Liquid Flow: ≥ 2.9 gallons per minute
	Pressure Drop: ≤ 12.0" WC
CM-ACD-201	Liquid Flow: $\geq 2.3$ gallons per minute
	Pressure Drop: ≤ 2.0" WC
CM-ACD-203	Liquid Flow: ≥ 3.6 gallons per minute
	Pressure Drop: ≤ 2.0" WC
CM-ACD-406	Liquid Flow: $\geq 5.1$ gallons per minute
	Pressure Drop: ≤ 2.0" WC

The permittee shall maintain documentation for periods of startup and shutdown to confirm that the scrubber is operating properly prior to emission unit startup and continues to operate properly until emission unit shutdown is complete. Appropriate startup and shutdown operating parameters may be based on equipment design, manufacturer's recommendations, or other site-specific operating values established for normal operating periods.

(9 VAC 5-80-110, 40 CFR 63.5505 and Table 2 to Subpart UUUU of Part 63)

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- 11. **CMC Process Area Monitoring –** The CMC Process Area VOC still output shall be continuously measured and the totalized flow recorded once per shift. (9 VAC 5-80-110 and Condition E.10 of the 7/12/96 RACT Agreement)
- 12. **CMC Process Area Monitoring** A monthly inspection shall be conducted on each fabric filter listed in Condition 8 (including a visual inspection of structural integrity and a differential pressure reading of 0.2 to 15.0 inches water) to ensure the proper operation of each control system. The permittee shall maintain records of the results of the monthly inspections and details of any corrective actions taken as a result of these inspections. These records shall be available onsite for inspection by the DEQ and shall be current for the most recent five years.

  (9 VAC 5-80-110 E)
- 13. **CMC Process Area Monitoring** Each fabric filter subject to Condition 9 shall be observed visually at least once each operating month for at least a brief time period to determine which emission units have any visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60, Appendix A, Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having any visible emissions shall be followed up with a 40 CFR 60, Appendix A, Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.

  (9 VAC 5-80-110 E)
- 14. **CMC Process Area Recordkeeping** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:
  - a. Annual VOC emissions from the CMC Process Area, calculated monthly as the sum of each consecutive 12-month period, and any emission factors, material throughputs or material balance calculations used in calculating these emissions.
  - b. The annual production of CMC, calculated monthly as the sum of the previous consecutive 12 months' production.
  - c. All records necessary to demonstrate compliance with the emission standard contained in Condition 5, including:
    - inventory records, purchase records and cost sheets which show changes in inventory;
    - cumulative records of solvent throughput as specified in Condition 11;
    - wastewater sampling and flow measurement data;
    - derivation loss correlation data;
    - product residual data; and
    - calculations and all background data used to calculate VOC control efficiency in accordance with Condition 5 of this permit.
  - d. Daily records necessary to demonstrate compliance with Condition 10.
  - e. Records of monthly inspections required by Condition 12.

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- f. The annual particulate emissions from the equipment listed in Condition 8, calculated monthly as the sum of each consecutive 12-month period, and any emission factors, material throughputs and/or material balance calculations used in calculating these emissions.
- g. The results of the monthly visible emission surveys required by Condition 13 and details of any corrective action taken as a result of these inspections.
- h. Maximum hourly particulate emissions from the equipment listed in Condition 8, calculated at the end of each month for that month, and any emission factors, operating hours, material throughputs and/or material balance calculations used in calculating these emissions.
- i. The results of the semi-annual salt/acetone conversion factor evaluations.
- j. Scheduled and unscheduled maintenance, and operator training.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110, Condition E.14 of the 7/12/96 RACT Agreement and Condition 12 of the 12/18/14 Permit)

- 15. **CMC Process Area Reporting** The permittee shall report the results of any 40 CFR Part 60 Method 9 opacity test performed as a result of Condition 13 above. If the test indicates the facility is out of compliance with the standard contained in Condition 9, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Condition 125. (9 VAC 5-80-110)
- 16. **CMC Process Area Reporting Notification for Control Equipment Maintenance** The permittee shall furnish notification to the Piedmont Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance which results in excess emissions for more than one hour at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
  - a. Identification of the specific process to be taken out of service, as well as its location, and registration number;
  - b. The expected length of time that the air pollution control equipment will be out of service;
  - c. The nature and quantity of air pollutants likely to occur during the shutdown period;
  - d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.
  - (9 VAC 5-80-110 and Condition 14 of the 12/18/14 Permit)

# PROCESS EQUIPMENT REQUIREMENTS – HYDROXYETHYL CELLULOSE (NATROSOL) PROCESS AREA

- 17. **Natrosol Process Area Limitations Emission Controls** Particulate Matter/PM<sub>10</sub>/PM<sub>2.5</sub> emissions from the Natrosol process area, including the cellulose shredding operation, the two Netzch-Condux (or equivalent) grinding mills, the Bauermeister (or equivalent) grinding mill, the automated air packer and pneumatic transfer systems, and the Silica Bulk Bag System (NA-AEU-110) shall be controlled by baghouses. The baghouses shall be operated at all times when their associated process equipment is in operation, and the baghouses shall be provided with adequate access for inspection. (9VAC5-80-110 and Condition 1 of the 4/20/20 Permit)
- 18. **Natrosol Process Area Limitations Emission Controls** Fugitive emissions from the Cellulose Weigh Bins (NA-AEU-011 and NA-AEU-012) and the Dryer Storage Bins (NA-AEU-062 through 065) shall be controlled by bag filters, at minimum. The bag filters shall be operated at all times when the weigh bins are in operation, and the bag filters shall be provided with adequate access for inspection. (9VAC5-80-110 and Condition 2 of the 4/20/20 Permit)
- 19. **Natrosol Process Area Limitations Emission Controls** Volatile Organic Compound emissions from the Natrosol reactors, viscosity reduction vessels, purification process, centrifuges, and solvent recovery distillation columns shall be controlled by the Natrosol solvent vent scrubber (NA-ACD-101). The scrubber shall be provided with adequate access for inspection and shall be in operation at all times when the Natrosol process area is operating. (9VAC5-80-110 and Condition 3 of the 4/20/20 Permit)
- 20. **Natrosol Process Area Limitations Emission Controls** Volatile Organic Compound emissions from the Natrosol Continuous Dryer (NA-AEU-104) and Natrosol Continuous Dryer Centrifuge (NA-AEU-105) shall be controlled by a scrubber (NA-ACD-102). The scrubber shall be provided with adequate access for inspection, and shall be in operation at all times when the Natrosol Continuous Dryer and/or Centrifuge are in operation.

  (9VAC5-80-110 and Condition 4 of the 4/20/20 Permit)
- 21. **Natrosol Process Area Limitations Production Limits** The annual production of Natrosol shall not exceed 22,000 tons/yr, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. (9VAC5-80-110 and Condition 9 of the 4/20/20 Permit)
- 22. **Natrosol Process Area Limitations Emission Standard** VOC emissions from the Natrosol Process Area shall be controlled by the use of solvent recovery and process scrubbers having an overall VOC control efficiency of at least 98% on a mass basis, calculated monthly as a six-month rolling average. Best Available Control Technology shall be demonstrated by material balance according to the following equation:

$$\sum_{i=1}^{i=6} (V_T - V_A)_i / \sum_{i=1}^{i=6} (V_T)_i \ge 98\%$$

where:

- $V_T$  = mass of VOC (in pounds) circulated/used through the process area during a one-month period, as determined from inventory measurements and/or from measured flow and VOC concentration of still output
- VA = mass of VOC (in pounds) lost to the air from point, nonpoint, and fugitive sources which cannot be accounted for as other losses (including but not limited to reaction consumption, recycle/recovery, product retention, sewer loss, and product transfer), as determined by material balance, using the equation:

$$V_A = V_L - V_O$$

where:

- V<sub>L</sub>= mass of final inventory from the current month, minus mass of starting inventory from current month, minus mass of solvent purchased in the current 1-month period, (as determined from purchase records and cost sheets which show changes in inventory)
- V<sub>O</sub> = mass of non-air VOC losses which include but are not limited to: reaction consumption, recycle/recovery, product retention, sewer loss and product transfer
- i = month number one through month number six of the 6-month rolling average
  - sewer losses are calculated based on continuous flow-weighted composite samples of wastewater and physical flow measurements
  - derivation losses are calculated based on a product-specific correlation between production rate and solvent loss taken from previous study of this type of loss
  - product residual losses are determine from previous sampling and product-specific data on solvent remaining in the product as it leaves the plant.

Results of the compliance calculation shall be reported to the Virginia Department of Environmental Quality annually, and records will be maintained for a period of at least five years. (9VAC5-80-110, Condition E.6 of the 7/12/96 RACT Agreement, and Condition 10 of the 4/20/20 Permit)

23. **Natrosol Process Area** – **Limitations** - **Emission Limits** – Emissions from the operation of the Natrosol process area shall not exceed the limits specified below, calculated monthly as the sum of each consecutive 12-month period:

Volatile Organic Compounds

66.6 tons/yr

(9VAC5-80-110 and Condition 11 of the 4/20/20 Permit)

24. **Natrosol Process Area – Limitations - Emission Limits** – Emissions from the operation of each of the dust collectors identified as Reference Numbers #201b, 201c, 202a, 202b, and 216 in Condition 25 shall not exceed the limit specified below:

Particulate Matter 0.005 grains/dscf

(9VAC5-80-110 and Condition 12 of the 4/20/20 Permit)

25. **Natrosol Process Area** – **Limitations** - **Emission Limits** – Particulate Matter/PM<sub>10</sub>/PM<sub>2.5</sub> emissions from the operation of the Natrosol process area reference points below shall not exceed the specified limits:

Ref. No.	Description	lb/hr	tons/yr
001	Intermediate cellulose receiver D.C. to Weigh Bin D.C.	1.4	4.0
002	Housekeeping Vacuum-East Cutter Room (D.C.)	*	*
003	Cellulose Weigh Bins to Process (ZPF)	*	*
004	Shredders to Intermediate Cellulose Receiver D.C.	1.4	4.0
005	Primary Cutter (Sprout-Waldron #1) D.C.	*	*
006	Primary Cutter (Sprout-Waldron #2) D.C.	*	*
007	Primary Cutter (Sprout-Waldron #3) D.C.	*	*
062a	Dryer Storage Bin #1 Bin Vent	*	*
063a	Dryer Storage Bin #2 Bin Vent	*	*
064a	Dryer Storage Bin #3 Bin Vent	*	*
065a	Dryer Storage Bin #4 Bin Vent	*	*
103	Dryer to Dryer Storage Bins (DSB) (ZPF)	*	*
201a	DSB to S-mill system – DSB D.C.	0.3	1.1
201b	Netzsch-Condux grinding mill (South) D.C.	0.2	0.9
201c	Netzsch-Condux grinding mill (North) D.C.	0.2	0.9
202a	Bauermeister Grinding Mill Feed System D.C.	0.1	0.3
202b	Bauermeister Grinding Mill D.C.	0.2	0.7
203	Bulk Storage Bin (BSB) Bottom Turnhead (ZPF)	*	*
204	BSB Top Turnhead (ZPF)	*	*
205	N-Air Mix Blender (AMB) Loading (W Cyclone) (ZPF)	*	*
206	BSB to S-load S-AMB Loading (SE Cyclone) (ZPF)	*	*
207	Regrind Mill to N-AMB (East Cyclone) (ZPF)	*	*
208	AMB Unload to N-PO (D.C.)	0.4	1.5
209	Addback Hopper Fugitives (D.C.)	0.4	1.6
210	N-AMB Pulse and Convey D.C.	*	*
211	S-AMB Pulse and Convey D.C.	*	*
212	Secondary Vac System for S-PO fugitives (D.C.)	0.2	0.9
213	North Weigh Bin Bag Filter Breather	*	*
214	South Weigh Bin Bag Filter Breather	*	*
215	Southeast Weigh Bin Bag Filter Breather	*	*
216	Silica Bulk Bag System	0.1	0.4

Note: (\*) denotes units where baghouses/emission points exist and are subject to Conditions 17 (or 18) and 26 of this permit, but have insignificant mass emission rates for the purposes of this Condition. Also, ZPF = Zero Point Filter & D.C. = Dust Collector.

(9VAC5-80-110 and Condition 13 of the 4/20/20 Permit)

26. **Natrosol Process Area – Limitations - Visible Emission Limit** – Visible emissions from the Natrosol process area baghouses shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40

CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.

(9VAC5-80-110 and Condition 14 of the 4/20/20 Permit)

27. **Natrosol Process Area** – **Limitations** – **Operating Limits (Natrosol Scrubber NA-ACD-101)** – The permittee shall maintain the daily average scrubber pressure drop and scrubber liquid flow rate within the values in this Condition. The permittee shall collect the scrubber pressure drop and scrubber liquid flow rate data according to §63.5545, reducing the scrubber parameter data to daily averages, and maintaining the daily scrubber parameter values within the range of values in this Condition. This permit may be administratively amended to change the values upon approval of a newer compliance demonstration.

Control Device	Daily Average Operating Limit
NA-ACD-101	Makeup Liquid Flow: ≥7.5 gallons per minute
	Recirculating Liquid Flow: ≥26.5 gallons per minute
	Pressure Drop: $\leq 2.0$ " W.C.

The permittee shall maintain documentation for periods of startup and shutdown to confirm that the scrubber is operating properly prior to emission unit startup and continues to operate properly until emission unit shutdown is complete. Appropriate startup and shutdown operating parameters may be based on equipment design, manufacturer's recommendations, or other site-specific operating values established for normal operating periods.

(9 VAC 5-80-110, 40 CFR 63.5505 and Table 2 to Subpart UUUU of Part 63)

- 28. **Natrosol Process Area Monitoring Monitoring Devices** Each baghouse for the equipment listed in Condition 17 shall be equipped with a device to both sense and alarm, and read out high differential pressure drop across the baghouse. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the associated baghouse is in operation. (9VAC5-80-110 and Condition 5 of the 4/20/20 Permit)
- 29. **Natrosol Process Area Monitoring Monitoring Devices** The Natrosol solvent vent scrubber (NA-ACD-101) shall be equipped with devices to continuously measure the scrubber liquid flow rate and the differential pressure drop across the scrubber. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring devices shall be provided with adequate access for inspection and shall be in operation when the scrubber is operating. (9VAC5-80-110 and Condition 6 of the 4/20/20 Permit)
- 30. **Natrosol Process Area Monitoring Monitoring Devices** The Natrosol continuous dryer and centrifuge scrubber (NA-ACD-102) shall be equipped with devices to continuously measure the scrubber liquid flow rate and the differential pressure across the scrubber. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring devices shall be provided with adequate access for inspection and shall be in operation when the scrubber is operating.

(9VAC5-80-110 and Condition 7 of the 4/20/20 Permit)

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- 31. Natrosol Process Area –Monitoring/Recordkeeping A monthly inspection shall be conducted on each fabric filter in the Natrosol production area (including the weigh bins bag filter) and its associated differential pressure device listed in Conditions 17 and 18 to ensure the proper operation of each fabric filter and its associated differential pressure device (indicated by a differential pressure of 0.1 to 20.0 inches water). The permittee shall maintain records of the results of the monthly inspections and details of any corrective actions taken as a result of these inspections. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years. (9VAC5-80-110)
- 32. **Natrosol Process Area** –**Monitoring/Recordkeeping** Each fabric filter subject to Condition 2625 shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have any visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60 Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having any visible emissions shall be followed up with a 40 CFR 60 Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded. (9VAC5-80-110)
- 33. **Natrosol Process Area –Monitoring/Recordkeeping** The Natrosol Process Area VOC still output shall be continuously measured and the totalized flow recorded once per shift. (9VAC5-80-110 and Condition E.10 of the 7/12/96 RACT Agreement)
- 34. **Natrosol Process Area –Recordkeeping** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:
  - a. Annual production of Natrosol, calculated as the sum of each consecutive 12 month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual totals for the preceding 11 months.
  - b. All records necessary to show compliance with Conditions 22 and 23, including:
    - inventory records, purchase records and cost sheets which show changes in inventory;
    - cumulative records of solvent throughput as specified in Condition 33;
    - wastewater sampling and flow measurement data;
    - derivation loss correlation data:
    - product residual data; and
    - calculations and all background data used to determine VOC emissions and VOC control efficiency in accordance with Conditions 22 and 23 of this permit.
  - c. Operation and control device records for each baghouse controlling equipment listed in Conditions 17 and 18, and for scrubbers NA-ACD-101 and NA-ACD-102 as required in Conditions 29 and 30.
  - d. Daily records necessary to demonstrate compliance with Condition 27.
  - e. Records of monthly inspections required by Condition 31.

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- f. The annual particulate emissions from the equipment listed in Condition 25, calculated monthly as the sum of each consecutive 12-month period, and any emission factors, material throughputs and/or material balance calculations used in calculating these emissions.
- g. The results of the monthly visible emission surveys of the Natrosol production area fabric filters (required by Condition 32) and details of any corrective action taken as a result of these inspections.
- h. The maximum hourly particulate emissions from the equipment listed in Condition 25, calculated at the end of each month for that month, and any emission factors, operating hours, material throughputs and/or material balance calculations used in calculating these emissions.
- i. Results of all stack tests, visible emission evaluations and performance evaluations.
- j. Scheduled and unscheduled maintenance, and operator training.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.

(9VAC5-80-110, Condition E.14 of the 7/12/96 RACT Agreement and Condition 19 of the 4/20/20 Permit)

- 35. Natrosol Process Area Testing Initial Stack Test Initial performance tests shall be conducted for particulate matter from NA-ACD-216 using reference method 5 to determine compliance with the emission limits contained in Conditions 24 and 25. The tests shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410. The performance test shall include a test method performance audit (PA), where applicable. The details of the tests are to be arranged with the Piedmont Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Piedmont Regional Office within 45 after test completion and shall conform to the test report format enclosed with this permit. (9VAC5-80-110 and Condition 15 of the 4/20/20 Permit)
- Natrosol Process Area Testing Initial Visible Emissions Evaluation Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall also be conducted by the permittee on the following emission points: Dryer Storage Bin #1-#4 (NA-ACD-062 through NA-ACD-065), Silica Hopper Bin (NA-ACD-216), and Dust Conveyance System ZPF (NA-ACD-103). Each test shall consist of ten sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Piedmont Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. The evaluation shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Should conditions prevent concurrent opacity observations, the Piedmont Regional Office shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance

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tests. One copy of the test results shall be submitted to the Piedmont Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit. (9VAC5-80-110 and Condition 16 of the 4/20/20 Permit)

- 37. **Natrosol Process Area Reporting** The permittee shall report the results of any 40 CFR Part 60 Method 9 opacity test performed as a result of Condition 32. If the test indicates the facility is out of compliance with the visible emissions standard contained in Condition 26, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Condition 125. (9 VAC 5-80-110)
- 38. **Natrosol Process Area Notification** The permittee shall furnish notification of the following to the Piedmont Regional Office:
  - a. Quarterly status reports for the modified Natrosol process. The quarterly reports shall be submitted to the Piedmont Regional Office within 30 days after the end of the calendar quarter. Each status report shall include a list of the completed modifications for the report period, the date each such modification was completed/implemented, a description of each such modification and its role in the Natrosol production process and the status of the overall project.
  - b. The final quarterly report (the report submitted within 30 days after the calendar quarter in which all projects are completed) shall contain the information contained in Condition 38a, as well as notification of the actual start-up date of the modified Natrosol Production Area.

(9VAC5-80-110 and Condition 18 of the 4/20/20 Permit)

- 39. Natrosol Process Area Reporting Notification for Control Equipment Maintenance The permittee shall furnish notification to the Piedmont Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance which results in excess emissions for more than one hour at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
  - a. Identification of the specific process to be taken out of service, as well as its location, and registration number;
  - b. The expected length of time that the air pollution control equipment will be out of service;
  - c. The nature and quantity of air pollutants likely to occur during the shutdown period;
  - d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9VAC5-80-110)

# PROCESS EQUIPMENT REQUIREMENTS – HYDROXYPROPYL CELLULOSE (KLUCEL) PROCESS AREA

40. **Klucel Process Area – Limitations - Emission Controls** – Particulate emissions from the Klucel process area shall be controlled by fabric filters having control efficiencies of at least 99% as specified below. The fabric filters shall be provided with adequate access for inspection. Each fabric filter shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's recommended requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when its associated fabric filter is operating.

Emission/Process Unit	Control Device
Cellulose shredders #1-3 (KL-AEU-001, KL-	Klucel cellulose bin fabric filter (KL-ACD-001)
AEU-002, KL-AEU-037);	
Condux cutter (KL-AEU-003);	
cellulose weigh bin (KL-AEU-004)	
Cellulose process conveyance system (KL-	Klucel cellulose process fabric filter (KL-ACD-
AEU-002)	002)
Airmix blenders #1 – #4 (KL-AEU-028, KL-	Klucel blender fabric filters #1 – #4
AEU-029, KL-AEU-030, KL-AEU-042)	(KL-ACD-201A-D); one filter for each blender
Automated packing system (KL-AEU-031)	Klucel packing/addback filter (KL-ACD-202)
and addback hopper (KL-AEU-032)	
KPR Process Vacuum System (KL-AEU-202)	Klucel housekeeping fabric filter (KL-ACD-203)
Housekeeping vacuum system (KL-AEU-203)	Klucel housekeeping fabric filter (KL-ACD-203)
Fluidized mill grinder and product handling	Klucel blender fabric filter #5 (KL-ACD-201E)
(KL-AEU-204)	

(9VAC5-80-110 and Condition 1 of the 3/20/19 Permit)

- 41. **Klucel Process Area Limitations Emission Controls** Particulate emissions from the packer fill hopper section of the automated packing system (KL-AEU-031) shall be controlled by a hopper vent filter. The hopper vent filter shall be provided with adequate access for inspection. (9VAC5-80-110 and Condition 2 of the 3/20/19 Permit)
- 42. **Klucel Process Area Limitations Emission Controls** Volatile Organic Compound (VOC) fugitive emissions from the three purification centrifuges (KL-AEU-007, KL-AEU-008, KL-AEU-010) shall be controlled by mechanical seals. The centrifuges and mechanical seals shall be provided with adequate access for inspection.

(9VAC5-80-110 and Condition 2 of the 3/20/19)

43. **Klucel Process Area – Limitations - Emission Controls –** VOC emissions from the Klucel process area point sources shall be controlled by packed bed scrubbers as follows:

Emission/Process Unit	Control Device
Reactor #2 (KL-AEU-005)	Klucel process scrubber (KL-ACD-101)
Reactor #3 (KL-AEU-038)	Klucel process scrubber (KL-ACD-101)
Dryer feed tub (KL-AEU-017)	Klucel process scrubber (KL-ACD-101)
Three purification centrifuges (KL-AEU-007, KL-	Klucel process scrubber (KL-ACD-101)
AEU-008, KL-AEU-009)	
Three purification wash tubs (KL-AEU-010, KL-	Klucel process scrubber (KL-ACD-101)
AEU-011, KL-AEU-012)	
Acetic acid head tank and transfer system (KL-	Klucel acetic acid scrubber (KL-ACD-103)
AEU-014)	
Distillation Column A-671 (KL-AEU-033 to 036)	Klucel process scrubber (KL-ACD-101)
Heptane tank KL-TNK-307	Klucel process scrubber (KL-ACD-101)
TBA tank KL-TNK-308	Klucel process scrubber (KL-ACD-101)
Distillation feed tank KL-TNK-309	Klucel process scrubber (KL-ACD-101)
Spent tank KL-TNK-322	Klucel process scrubber (KL-ACD-101)
Heptane tank KL-TNK-337	Klucel process scrubber (KL-ACD-101)
PO storage tank, KL-TNK-363 (purge only)	EO/PO scrubber (NA-ACD-301)
PO scale tank KL-TNK-364 (purge only)	EO/PO scrubber (NA-ACD-301)

The scrubbers shall be provided with adequate access for inspection. (9VAC5-80-110 and Condition 4 of the 3/20/19 Permit)

- 44. **Klucel Process Area Limitations Production Limit** The annual production of Klucel shall not exceed 4,800 tons/yr, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months. (9VAC 5-80-110 and Condition 6 of the 3/20/19 Permit)
- 45. **Klucel Process Area Limitations Emission Standard** Volatile Organic Compound emissions from the Klucel Process Area shall be controlled by solvent recovery and process scrubbers, having an overall VOC control efficiency of at least 96% on a mass basis, calculated monthly as a 6-month rolling average. Best Available Control Technology and compliance with the annual VOC emission limit contained in Condition 46 shall be demonstrated by material balance according to the following equation:

$$\sum_{i=1}^{i=6} (V_T - V_A)_i / \sum_{i=1}^{i=6} (V_T)_i \times 100 \ge 96\%$$

where:

V<sub>T</sub>= mass of VOC (in pounds) circulated/used through the process area during a one-month period, as calculated from measured VOC flow

V<sub>A</sub>= mass of VOC (in pounds) lost to the air from point, nonpoint and fugitive sources which cannot be accounted for as other losses (including but not limited to reaction consumption,

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recycle/recovery, product retention, sewer loss, and product transfer), as determined by material balance, using the equation:

 $V_A = V_{LOSS} - V_{OTHER}$ 

where:

V<sub>LOSS</sub> = mass of final inventory from current month, minus mass of starting inventory from current month, minus mass of solvent purchased in the current 1-month period (as determined from purchase records and cost sheets which show changes in inventory)

V<sub>OTHER</sub> = mass of non-air VOC losses which include but are not limited to: reaction consumption, recycle/recovery, product retention, sewer loss and product transfer

i = month number one through month number six of the 6-month rolling average

Results of the compliance calculation shall be reported to the Virginia Department of Environmental Quality annually, and records will be maintained for a period of at least five years. (9VAC5-80-110, Condition E.3 of the 7/12/96 RACT Agreement and Condition 7 of the 3/20/19 Permit)

46. **Klucel Process Area – Limitations - Emission Limits** – Emissions from the operation of the Klucel process area shall not exceed the limits specified below, calculated monthly as the sum of each consecutive 12-month period:

Volatile Organic Compounds

181.0 tons/yr

Compliance with this emission limit may be determined as stated in Condition 45. (9VAC5-80-110 and Condition 8 of the 3/20/19 Permit)

- 47. **Klucel Process Area Limitations Visible Emission Limit -** Visible emissions from the fabric filters and hopper vent filter specified in Conditions 40 and 41 shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.

  (9VAC5-80-110 and Condition 9 of the 3/20/19 Permit)
- 48. **Klucel Process Area Limitations Operating Limits** The permittee shall maintain the daily average scrubber pressure drop and scrubber liquid flow rate within the values in this Condition. The permittee shall collect the scrubber pressure drop and scrubber liquid flow rate data according to §63.5545, reducing the scrubber parameter data to daily averages, and maintaining the daily scrubber parameter values within the range of values in this Condition. This permit may be administratively amended to change the values upon approval of a newer compliance demonstration.

Control Device Daily Average Opera	ating Limit
KL-ACD-101 Liquid Flow: ≥7.5 gallons pressure Drop: < 3.0" W.C	•
Pressure Drop: ≤ 3.0" W.C	-

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The permittee shall maintain documentation for periods of startup and shutdown to confirm that the scrubber is operating properly prior to emission unit startup and continues to operate properly until emission unit shutdown is complete. Appropriate startup and shutdown operating parameters may be based on equipment design, manufacturer's recommendations, or other site-specific operating values established for normal operating periods.

(9 VAC 5-80-110, 40 CFR 63.5505 and Table 2 to Subpart UUUU of Part 63)

- 49. **Klucel Process Area Monitoring –** VOC flow shall be measured and the totalized flow recorded for each batch.
  - (9 VAC 5-80-110 and Condition E.9 of the 7/12/96 RACT Agreement)
- 50. **Klucel Process Area Monitoring/Recordkeeping** A monthly inspection shall be conducted on the mechanical seals on the centrifuges, Centrifuge #1 3, the hopper vent filter, as well as each fabric filter listed in Condition 40 to insure proper operation of each seal, vent filter, fabric filter and each fabric filter's differential pressure device. The permittee shall maintain records of the results of the monthly inspections and details of any corrective actions taken as a result of these inspections. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years. (9 VAC 5-80-110)
- 51. **Klucel Process Area Monitoring/Recordkeeping** Each fabric filter subject to Condition 47 shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have any visible emissions (does not include condensed water vapor/steam), unless a 40 CFR 60, Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having any visible emissions shall be followed up with a 40 CFR 60, Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded. (9VAC 5-80-110)
- 52. **Klucel Process Area Recordkeeping –** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:
  - a. Annual production of Klucel, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual totals for the preceding 11 months.
  - b. Monthly VOC inventory and throughput records which demonstrate compliance with Conditions 44, 45, and 49 including:
    - Records of VOC flow for each batch, inventory records, purchase records and cost sheets which show changes in inventory;
    - Wastewater sampling and flow management data;
    - Derivation loss correlation data;
    - Product residual data; and
    - Calculations used to determine VOC emissions and VOC control efficiency in accordance with Conditions 44, 45, and 49 of this permit.

- c. Daily records necessary to demonstrate compliance with Condition 48.
- d. Records of monthly inspections required by Condition 50.
- e. The results of the monthly visible emission surveys required by Condition 51 and details of any corrective action taken as a result of these inspections.
- f. Scheduled and unscheduled maintenance, and operator training.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-110, Condition E.14 of the 7/12/96 RACT Agreement and Condition 10 of the 3/20/19 Permit)

53. **Klucel Process Area – Reporting** – The permittee shall report the results of any 40 CFR Part 60 Method 9 opacity test performed as a result of Condition 51. If the test indicates the facility is out of compliance with the standard contained in Condition 47, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Condition 125.

(9 VAC 5-80-110)

54. **Klucel Process Area - Reporting -** The permittee shall submit the compliance report required by Condition 45 by March 1 each calendar year for the period ending December 31 of the previous calendar year.

(9VAC5-80-110 and Condition 11c of the 3/19/2020 Permit)

- 55. **Klucel Process Area Reporting Notification for Control Equipment Maintenance** The permittee shall furnish notification to the Piedmont Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance which results in excess emissions for more than one hour at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
  - a. Identification of the specific process to be taken out of service, as well as its location, and registration number;
  - b. The expected length of time that the air pollution control equipment will be out of service;
  - c. The nature and quantity of air pollutants likely to occur during the shutdown period;
  - d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-80-110)

# PROCESS EQUIPMENT REQUIREMENTS – ETHYL CELLULOSE (EC) PROCESS AREA

56. **EC Process Area – Limitations – Emission Controls –** Particulate emissions from the EC process shall be controlled by fabric filters or wet scrubbers as specified in Condition 62. Each fabric filter shall be equipped with a device to measure the differential pressure drop across the fabric filter. The device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times.

(9 VAC 5-80-110 and Condition 3 of the 2/24/06 Permit)

- 57. **EC Process Area Limitations Emission Controls –** Volatile organic compound emissions from the EC autoclave reactors, volatile organic liquid tanks and chemical recovery distillation columns shall be controlled by the EC vent scrubber (EC-ACD-101). The scrubber shall be provided with adequate access for inspection. The scrubber shall be equipped with a scrubber liquid flow meter and a device to continuously measure the differential pressure through the scrubber. (9 VAC 5-80-110 and Condition 4 of the 2/24/06 Permit)
- 58. **EC Process Area Limitations Emission Controls** The permittee shall maintain and implement a Volatile Organic Compounds control plan for the EC process area. The permittee shall keep a copy of the plan on the premises of the facility and the plan shall be available for inspection by the DEQ. The plan shall include, but not be limited to, the following elements:
  - Maximizing the VOC control efficiency of the EC vent scrubber;
  - The establishment of appropriate monitoring parameters and ranges to demonstrate compliance with the plan.

(9 VAC 5-80-110 and Condition 5 of the 2/24/06 Permit)

59. **Ethyl Cellulose Process Area – Limitations – Emission Standard** – Volatile Organic Compound emissions from the EC Process Area shall be controlled by solvent recovery and process scrubbers, having an overall VOC control efficiency of at least 90% on a mass basis, calculated monthly as a 6-month rolling average. Best Available Technology for VOC from the EC process shall be demonstrated by material balance according to the following equation:

$$\sum_{i=1}^{i=6} (V_T - V_A)_i / \sum_{i=1}^{i=6} (V_T)_i \times 100 \ge 90\%$$

where:

- V<sub>T</sub> = mass of VOC (in pounds) circulated/used through the process area during a one-month period, as calculated from inventory measurements
- V<sub>A</sub> = mass of VOC (in pounds) lost to the air from point, nonpoint and fugitive sources which cannot be accounted for as other losses (including but not limited to reaction consumption, recycle/recovery, product retention, sewer loss, and product transfer), as determined by material balance, using the equation:

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#### VA=VLOSS - VOTHER

where:

V<sub>LOSS</sub> = mass of final inventory from current month, minus mass of starting inventory from current month, minus mass of solvent purchased in the Current one-month period (as determined from purchase records and cost sheets which show changes in inventory)

V<sub>OTHER</sub> = mass of non-air VOC losses which include but are not limited to: reaction consumption, recycle/recovery, product retention, sewer loss and product transfer

- i = month number one through month number six of the 6-month rolling average
  - Sewer losses are calculated based on continuous flow-weighted composite samples of wastewater and physical flow measurements
  - Derivation losses are calculated based on product-specific correlation between production rate and solvent loss taken from previous study of this type of loss
  - Product residual losses are determined from previous sampling and product-specific data on solvent remaining in the product as it leaves the plant

Results of the compliance calculation shall be reported to the Virginia Department of Environmental Quality annually, and records will be maintained for a period of at least five years. (9 VAC 5-80-110, Conditions E.4 of the 7/12/96 RACT Agreement and Condition 8 of the 2/24/06 Permit)

- 60. **EC Process Area Limitations Production** The annual production of ethyl cellulose shall not exceed 3,500 tons per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-110 and Condition 7 of the 2/24/06 Permit)
- 61. **EC Process Area Limitations Emission Limits** Emissions from the operation of the EC process shall not exceed the limits specified below:

Volatile Organic Compounds

135.6 lbs/batch\*

126.0 tons/yr\*\*

- (\*) The lbs/batch limit above shall be applied as the sum of the outlets from the EC vent scrubber and from the combined leach tub vent. Compliance shall be determined as a three (3) batch average.
- (\*\*) The tons/yr limit above shall apply to the entire EC process area (the sum of the outlets from the EC vent scrubber and from the combined leach tub vent as well as fugitive emissions from all EC process equipment) and compliance shall be determined monthly as the sum of each consecutive 12 month period.
- (\*\*\*) The EC fugitive VOC emissions shall be calculated using the following basis: 0.0009 lb/hr for liquid and vapor connections; 0.008 lb/hr for liquid valves; 0.006 lb/hr for vapor valves; and 0.0545 lb/hr for pumps/agitators. (9 VAC 5-80-110 and Condition 9 of the 2/24/06 Permit)
- 62. **EC Process Area Limitations Emission Limits** Particulate and PM<sub>10</sub> emissions from the operation of the EC process reference points shall not exceed the limits specified below:

Reference No.	Description	lb/hr	tons/yr
EC-ACD-001	EC Cellulose Open Top Cyclone	4.2	8.8
EC-ACD-201	EC Dryer Wet Scrubber Vacuum Pump Vent #1	*	*
EC-ACD-206	EC Dryer Wet Scrubber Vacuum Pump Vent #2	*	*
EC-ACD-202	EC Dryer Unloading ZPF	*	*
EC-ACD-203	EC Blender Loading ZPF	*	*
EC-ACD-204	EC Packroom Vacuum D.C.	*	*
EC-ACD-205	EC Air Mix Blender ZPF	*	*

Note: (\*) denotes units where emission points exist and are subject to Condition 56, but have insignificant mass emission rates for the purposes of this Condition. Also, ZPF = Zero Point Filter & D.C. = Dust Collector

(9 VAC 5-80-110 and Condition 10 of the 2/24/06 Permit)

- 63. **EC Process Area Limitations Visible Emission Limitation** Visible emissions from all emission units and control devices in the EC Process Area shall not exceed 20% opacity except during one sixminute period in any one hour in which visible emissions shall not exceed 30% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). (9 VAC 5-80-110 and 9 VAC 5-50-80)
- 64. **EC Process Area Limitations Operating Limits** The permittee shall maintain the daily average scrubber pressure drop and scrubber liquid flow rate for the EC Production Area vent system scrubber within the range of values in this condition. The permittee shall collect the scrubber pressure drop and scrubber liquid flow rate data according to §63.5545, reducing the scrubber parameter data to daily averages, and maintaining the daily scrubber parameter values within the range of values in this condition. This permit may be administratively amended to change the values upon approval of a newer compliance demonstration.

Control Device	<b>Daily Average Operating Limit</b>
EC-ACD-101	Liquid Flow: ≥7.3 gallons per minute
	Pressure Drop: $\leq 0.9$ " WC
	Temperature: ≤ 33.5 °F

The permittee shall maintain documentation for periods of startup and shutdown to confirm that the scrubber is operating properly prior to emission unit startup and continues to operate properly until emission unit shutdown is complete. Appropriate startup and shutdown operating parameters may be based on equipment design, manufacturer's recommendations, or other site-specific operating values established for normal operating periods.

(9 VAC 5-80-110, 40 CFR 63.5505, and Table 2 to Subpart UUUU of Part 63)

65. **EC Process Area** – **Monitoring** – Each emission unit and control device with an atmospheric vent subject to Condition 63 shall be observed visually at least once each operating month for at least a brief time period to determine which emissions units have any visible emissions (does not include water vapor/steam), unless a 40 CFR 60, Appendix A Method 9 visible emissions evaluation is performed on the emissions unit. Each emissions unit observed having any visible emissions shall be followed up with a 40

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CFR 60, Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded.

(9 VAC 5-80-110)

- 66. **EC Process Area Recordkeeping** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:
  - a. Annual production of EC, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual totals for the preceding 11 months.
  - b. The annual quantity of EC production batches, calculated monthly as the sum of each consecutive 12 month period.
  - c. Daily records necessary to demonstrate compliance with Condition 64.
  - d. The annual VOC and particulate emissions from the emission units listed in Conditions 57 and 62, calculated monthly as the sum of each consecutive 12 month period, and any emission factors, material throughputs and/or material balance calculations used in calculating the VOC emissions.
  - e. The maximum hourly particulate emissions from the emission units listed in Condition 62, calculated at the end of each month for that month, and any emission factors, operating hours, material throughputs and/or 6-month rolling average material balance calculations used in calculating these emissions.
  - f. Records of stack test results demonstrating compliance with the batch emission limit specified in Condition 61 and records of any process changes that may have affected compliance with the batch emission limit.
  - g. The results of the monthly visible emission surveys required by Condition 65 and details of any corrective action taken as a result of these inspections.
  - h. Monthly VOC inventory and throughput records which demonstrate compliance with Conditions 59 and 61, including but not limited to:
    - Inventory records, purchase records and cost sheets which show changes in inventory;
    - Wastewater sampling and flow management data;
    - Derivation loss correlation data:
    - Product residual data: and
    - Calculations used to determine VOC emissions and VOC control efficiency in accordance with Conditions 59 and 61 of this permit (mass balance for Condition 59; batch emission calculations for Condition 61).

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These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110, Condition E.14 of the 7/12/96 RACT Agreement and Condition 14 of the 2/24/06 Permit)

- 67. **EC Process Area Reporting** The permittee shall report the results of any 40 CFR Part 60 Method 9 opacity test performed as a result of Condition 65. If the test indicates the facility is out of compliance with the standard contained in Condition 63, the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Piedmont Regional Office within seven days of the applicable test unless otherwise noted in Condition 125. (9VAC5-80-110)
- 68. **EC Process Area Reporting Notification for Control Equipment Maintenance** The permittee shall furnish notification to the Piedmont Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance which results in excess emissions for more than one hour at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
  - a. Identification of the specific process to be taken out of service, as well as its location, and registration number;
  - b. The expected length of time that the air pollution control equipment will be out of service;
  - c. The nature and quantity of air pollutants likely to occur during the shutdown period;
  - d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-80-110 and Condition 12 of the 2/24/06 Permit)

# MACT SUBPART UUUU – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR CELLULOSE PRODUCTS MANUFACTURING

- 69. **MACT Subpart UUUU Emission Limits and Work Practice Standards** For each cellulose ether operation (as defined in 40 CFR 63.5610), the permittee shall:
  - a. Reduce total uncontrolled organic HAP emissions by at least 99% for the sum of all cellulose ether process vents;
  - b. For each vent stream controlled using a control device, route the vent stream through a closed-vent system to the control device for the sum of all cellulose ether process vents;
  - c. Comply with the work practice standards in Condition 70 for closed vent systems for the sum of all cellulose ether process vents:

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- d. Comply by operating the closed loop system for each closed loop system;
- e. Comply with the applicable equipment leak standards 40 CFR 63.162 through 63.179 (except that references to "process unit" mean "cellulose ether process unit" for the purposes of this subpart); or comply with the applicable equipment leak standards of 40 CFR 63.1021 through 63.1037 (except that references to "process unit" mean "cellulose ether process unit" for the purposes of this subpart) for equipment leaks;
- f. Comply with the applicable wastewater provisions of §§63.105 and 63.132 through 63.140 for all sources of wastewater emissions; and
- g. Comply with the applicable provisions or §63.149 (except that references to "chemical manufacturing process unit" means "cellulose ether process unit" for the purposes of this subpart) for liquid streams in open systems.

(9VAC5-80-110 and 40 CFR 63.5505, Table 1 to Subpart UUUU of Part 63 (items 3, 4, and 7 through 9))

- 70. **MACT Subpart UUUU Work Practice Standards** For each existing or new affected source (as defined in 40 CFR 63.5610), the permittee shall:
  - a. Conduct annual inspections, repair leaks, and maintain records as specified in §63.148 for each closed-vent system used to route emissions to a control device;
  - b. Install, calibrate, maintain, and operate a flow indicator as specified in §63.148(f)(1); or secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration and inspect the seal or closure mechanism at least once per month as specified in §63.148(f)(2) for each closed-vent system containing a bypass line that could divert a stream away from a control device, except for equipment needed for safety purposes (described in §63.148(f)(3)); and
  - c. Monitor and repair the heat exchanger system according to §63.104(a) through (e) (except that references to "chemical manufacturing process unit" mean "cellulose food casing, rayon, cellulosic sponge, cellophane, or cellulose ether process unit" for the purposes of this subpart) for each heat exchanger system that cools process equipment or materials in the process unit.
  - (9 VAC 5-80-110 and 40 CFR 63.5505, Table 1 to Subpart UUUU of Part 63 (items 10 through 12))
- 71. **MACT Subpart UUUU Operating Limits** For each scrubber used to achieve compliance with 40 CFR 63, Subpart UUUU, the permittee shall maintain the daily average scrubber pressure drop and scrubber liquid flow rate within the range of values established during the 40 CFR 63, Subpart UUUU compliance demonstration. The permittee shall maintain documentation for periods of startup and shutdown to confirm that the scrubber is operating properly prior to emission unit startup and continues to operate properly until emission unit shutdown is complete. Appropriate startup and shutdown operating parameters may be based on equipment design, manufacturer's recommendations, or other site-specific operating values established for normal operating periods.

  (9 VAC 5-80-110 and 40 CFR 63.5505, Table 2 to Subpart UUUU of Part 63 (item 3))

- 72. **MACT Subpart UUUU Continuous Compliance** The permittee shall be in compliance with the emission limits, operating limits, and work practice standards in 40 CFR 63, Subpart UUUU at all times. (9 VAC 5-80-110 and 63.5515(a))
- 73. MACT Subpart UUUU Compliance Demonstration The permittee shall always operate and maintain the affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by MACT Subpart UUUU. The general duty to minimize emissions does not require further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(9 VAC 5-80-110 and 40 CFR 63.5515(b))

74. **MACT Subpart UUUU - Requirements by Reference** – Except where this permit is more restrictive than the applicable requirement, the permittee shall operate in compliance with all applicable requirements of 40 CFR 63, Subpart UUUU. The permittee shall be in compliance with the provisions of 40 CFR 63, Subpart A (General Provisions). Table 10 to Subpart UUUU of Part 63 shows which provisions of the General Provisions §§63.1 through 63.15 apply to the permittee. For the purposes of MACT Subpart UUUU, the applicable requirements in Table 10 to Subpart UUUU supersede the applicable Subpart A requirements in Subparts F, G, and H.

(9 VAC 5-80-110, 40 CFR 63.5515(h), and 40 CFR 63 Subparts A and UUUU)

- 75. MACT Subpart UUUU Initial Compliance with Emission Limits and Work Practice Standards The permittee shall demonstrate initial compliance with 40 CFR 63, Subpart UUUU in accordance with 40 CFR 63.5530(a) and Table 3 to Subpart UUUU of Part 63. (9 VAC 5-80-110, 40 CFR 63.5530(a), and Table 3 to Subpart UUUU of Part 63)
- 76. MACT Subpart UUUU Testing The permittee shall conduct each performance test in Table 4 to Subpart UUUU of Part 63 that applies to the affected source. The performance tests shall be conducted based on representative performance (i.e., performance based on normal operating conditions) of the affected source for the period being tested, according to the specific conditions in Table 4 to Subpart UUUU of Part 63, and the requirements of 40 CFR 63.5535. Representative conditions exclude periods of startup and shutdown. The permittee shall not conduct performance tests during periods of malfunction. The permittee shall record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the permittee shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

  (9 VAC 5-80-110, 40 CFR 63.5535, and Table 4 to Subpart UUUU of Part 63 (Items 1, 4, 7, and 8))
- 77. **MACT Subpart UUUU Continuous Monitoring Systems** The permittee shall, for each Continuous Monitoring System (CMS) required by 40 CFR 63, Subpart UUUU, develop and make available for inspection by the Piedmont Regional Office upon request, a site-specific monitoring plan that addresses

the provisions in 40 CFR 63.5545(a)(1-3) and (b)(1-3). The permittee shall conduct a performance evaluation of each CMS in accordance with the facility's site-specific monitoring plan. The permittee shall operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

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The permittee shall also meet the requirements of 40 CFR 63.5545(f) for each continuous parameter monitoring system (CPMS).

(9 VAC 5-80-110 and 40 CFR 63.5545(a-d, f))

- 78. **MACT Subpart UUUU Continuous Compliance** The permittee shall demonstrate continuous compliance with each emission limit, operating limit, and work practice standard in Conditions 69 and 70 according to methods specified in Tables 5 and 6 to Subpart UUUU of Part 63. (9 VAC 5-80-110 and 40 CFR 63.5555(a))
- 79. **MACT Subpart UUUU Deviations Reporting** The permittee shall report each instance in which the affected source was not in continuous compliance (as specified in Tables 5 and 6 to Subpart UUUU of Part 63) with each applicable emission limit, operating limit, and work practice standard in 40 CFR 63, Subpart UUUU. This includes periods of startup, shutdown, and malfunction. These instances are deviations from the emission limits, operating limits, and work practice standards in 40 CFR 63, Subpart UUUU. These deviations must be reported according to the requirements in Condition 83. (9VAC5-80-110 and 40 CFR 63.5555(b))
- 80. MACT Subpart UUUU Monitoring and Data Collection to Demonstrate Continuous Compliance The permittee shall monitor and collect data in accordance with 40 CFR 63.5560. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall monitor continuously (or collect data at all required intervals) at all times that the affected source is operating, including periods of startup, shutdown, and malfunction. (9VAC 5-80-110 and 40 CFR 63.5560(a-b))
- 81. **MACT Subpart UUUU Notification of Compliance Status** The permittee shall submit each notification in Table 7 to Subpart UUUU of Part 63 that applies to the affected source by the date specified in Table 7 to Subpart UUUU of Part 63. Initial notifications and Notification of Compliance Status Reports shall be electronically submitted in portable document format (PDF) following the procedure specified in 40 CFR 63.5580(g).

  (9 VAC 5-80-110, 40 CFR 63.5575, and Table 7 to Subpart UUUU of Part 63)
- 82. **MACT Subpart UUUU Reporting Requirements** The permittee shall submit each report to Table 8 to Subpart UUUU of Part 63 that applies to the affected source. Unless the Administrator has approved a different schedule for submitting reports under §63.10, the permittee shall submit each compliance report by the date in Table 8 to Subpart UUUU of Part 63 and according to the requirements in 40 CFR 63.5580(b)(1-6). Each compliance report shall contain all applicable information specified in 40 CFR 63.5580(c-e), and shall be submitted in accordance with the procedures specified in 40 CFR 63.5580(g). (9 VAC 5-80-110, 40 CFR 63.5580, and Table 8 to Subpart UUUU of Part 63)
- 83. **MACT Subpart UUUU Reporting Requirements** The permittee shall report all deviations as defined in 40 CFR 63, Subpart UUUU in the semi-annual monitoring report required by Condition 123 of this permit. If a compliance report is submitted according to Table 8 to Subpart UUUU of Part 63, and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice standard in 40 CFR 63, Subpart UUUU, then submitting the compliance report will satisfy any obligation to report the same deviations in the semi-annual monitoring report. However, submitting a compliance report will not otherwise affect any obligation the permittee has to

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report permit deviations from permit requirements to the Piedmont Regional Office as required in Conditions 125 and 126 of this permit.

(9 VAC 5-80-110 and 40 CFR 63.5580(f), and Table 8 to Subpart UUUU of Part 63)

84. MACT Subpart UUUU - Recordkeeping Requirements – The permittee shall keep records in Table 9 to Subpart UUUU of Part 63 that apply to the affected source. These records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). Each record must be kept for five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Any records required to be maintained by MACT Subpart UUUU that are submitted electronically via EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for the permittee to make records, data, and reports available upon request to DEQ or the EPA as part of an on-site compliance evaluation. (9VAC5-80-110 and 40 CFR 63.5590)

### PROCESS EQUIPMENT REQUIREMENTS – TECHNICAL FACILITY

- 85. **Technical Facility Limitations Emission Limits** Volatile organic compound emissions from the Technical Facility Process Area shall be controlled by solvent recovery and process scrubbers, and shall not exceed 15 tons per year. Compliance with this emission limit shall be demonstrated by annual reporting of VOC emissions.
  - (9 VAC 5-80-110 and Condition E.8 of the 7/12/96 RACT Agreement)
- 86. **Technical Facility Limitations Visible Emissions Limit** Visible emissions from the Technical Facility Process Area shall not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity, as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.
  - (9 VAC 5-80-110 and 9 VAC 5-50-80)
- 87. **Technical Facility Monitoring –** The emissions from the Technical Facility process scrubbers shall be observed visually at least once a month for at least a brief time period during normal operations to determine if there are visible emissions from each (does not include condensed water vapor/steam), unless a 40 CFR 60, Appendix A Method 9 visible emissions evaluation is performed on each emission unit/source. Each emission unit/source observed having visible emissions shall be followed up with a 40 CFR 60, Appendix A Method 9 visible emissions evaluation unless the visible emission condition is corrected as expeditiously as possible and recorded, and the cause and corrective measures taken are recorded. The permittee shall keep a log of the visible emissions observations. (9 VAC 5-80-110)
- 88. **Technical Facility Monitoring –** Each process scrubber shall be equipped with a scrubber liquid flow meter. Each flow meter shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. The scrubbers shall be provided with adequate access for inspection and shall be in operation when any of the equipment is operating. The scrubber liquid flow shall be recorded once per shift when the equipment is operating. If the flow rate is less than 7.5 gpm, then the permittee shall record the cause and any corrective measures taken. (9 VAC 5-80-110)

- 89. **Technical Facility Recordkeeping** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:
  - a. Annual VOC emissions from the Technical Facility, calculated monthly as the sum of each consecutive 12-month period, and any emission factors, material throughputs and/or material balance calculations used in calculating the VOC emissions.
  - b. Records of visible emissions evaluations required by Condition 87.
  - c. Records of scrubber liquid flow rate and any corrective measures taken as required by Condition 88.
  - (9 VAC 5-80-110 and Condition E.14 of the 7/12/96 RACT Agreement)

### PROCESS EQUIPMENT REQUIREMENTS – STORAGE TANKS

90. **Storage Tanks – Limitations –** The storage tanks listed in the table below are subject to the Conditions of this section as specified:

AREA	Tank ID #	Subject to	Subject to	Subject to
		Condition 91	Condition 92	Condition 94d
CMC	CM-TNK-413	X	X	
CMC	CM-TNK-414	X	X	
CMC	CM-TNK-416	X	X	
CMC	CM-TNK-408	X	X	Х
CMC	CM-TNK-418	X		
CMC	CM-TNK-420	X	X	
CMC	CM-TNK-407	X	X	
CMC	CM-TNK-411	X		
CMC	CM-TNK-409	X	X	
CMC	CM-TNK-410	X		
CMC	CM-TNK-422	X	X	
CMC	CM-TNK-423	X	X	
CMC	T-1	X	X	
CMC	T-2	X	X	
CMC	CM-TNK-417	X		
CMC	CM-TNK-419	X		
CMC	CM-TNK-415	X		
CMC	CM-TNK-412	X		
CMC	MC-TNK-294			
	(T-94)	X		
CMC	MC-TNK-295			
	(T-95)	X		
Natrosol	NA-TNK-341	X	X	
Natrosol	NA-TNK-347	X		
Natrosol	NA-TNK-342	X	X	
Natrosol	NA-TNK-343	X	X	
Natrosol	NA-TNK-330	X	X	
Klucel	KL-TNK-306	X		
Klucel	KL-TNK-322	X		X

AREA	Tank ID #	Subject to	Subject to	Subject to
		Condition 91	Condition 92	Condition 94d
Klucel	KL-TNK-309	X	X	
Klucel	KL-TNK-308	X		
Klucel	KL-TNK-307	X		
Klucel	KL-TNK-337	X		
Klucel	KL-TNK-363	X		
Klucel	KL-TNK-364	X		
EC	EC-TNK-315	X		
EC	EC-TNK-322	X		
EC	EC-TNK-324	X		
EC	EC-TNK-325	X		X
EC	EC-TNK-326	X		
EC	EC-TNK-327	X		
EC	EC-TNK-321	X		
EC	EC-TNK-328	X		
EC	EC-TNK-310	X		
TechFac	TF-TNK-510	X		
TechFac	TF-TNK-520	X		
TechFac	TF-TNK-530	X		
TechFac	TF-TNK-540	X		
TechFac	TF-TNK-550	X		
TechFac	TF-TNK-560	X		
TechFac	TF-TNK-570	X		

(9 VAC 5-80-110)

- 91. **Storage Tanks Limitations Emission Controls -** Each storage tank indicated in Condition 90 shall be equipped with a control method that will remove, destroy, or prevent the discharge into the atmosphere of at least 60% by weight of VOC emissions during the filling of such tank. The use of a submerged fill pipe shall be considered acceptable achievement of this standard.

  (9 VAC 5-80-110, 9 VAC 5-40-3430A and 9 VAC 5-40-3440B)
- 92. **Storage Tanks Limitations Emission Controls -** Each storage tank indicated in Condition 90 shall be equipped with a control method that will remove, destroy or prevent the discharge into the atmosphere of at least 90% by weight of VOC emissions.

  (9 VAC 5-80-110, 9 VAC 5-40-3430B and 9 VAC 5-40-3440B)
- 93. **Storage Tanks Monitoring/Recordkeeping –** A monthly inspection shall be conducted on each control device (including, but not limited to, the CMC Field Tank Vent Scrubber (CM-ACD-406), the Natrosol EO/PO and Solvent Vent Scrubbers (NA-ACD-301 and NA-ACD-101) and the Klucel Process Vent Scrubber (KL-ACD-301)) used to achieve compliance with Condition 92 for any storage tank so indicated in Condition 90. The inspection shall include both the structural integrity and the operating parameters of each control device. The permittee shall maintain records of the results of the monthly inspections and details of any corrective actions taken as a result of these inspections. These records shall be available on site for inspection by the DEQ and shall be current for the most recent five years. (9 VAC 5-80-110)
- 94. **Storage Tanks Monitoring/Recordkeeping –** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and

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format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:

- a. Certification of submerged fill pipe for each storage tank subject to Condition 91.
- b. Certification/demonstration that each control device used to achieve compliance with Condition 92 is capable of achieving 90% VOC control efficiency as well as the appropriate operating range for each operating parameter necessary to demonstrate that each control device is continuing to meet or exceed the 90% VOC control efficiency requirement.
- c. Records of monthly inspections indicated in Condition 93.
- d. For each storage tank indicated in Condition 90, the dimensions of each storage tank and an analysis showing the capacity of the storage tank.

(9 VAC 5-80-110 and 40 CFR 63.123(a))

# FUEL BURNING EQUIPMENT REQUIREMENTS - EMERGENCY GENERATOR AND WATER PUMPS – (emission unit ID #EG-AEU-001, WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005)

- 95. **Fuel Burning Equipment Requirements (emission unit ID#EG-AEU-001, WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005) Visible Emissions** Visible emissions from the emergency generator (EG-AEU-001) and emergency water pumps (WP-EAU-001 through WP-EAU-005) shall not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity. (9 VAC 5-50-80 and 9 VAC 5-80-110)
- 96. Fuel Burning Equipment Requirements (emission unit ID #EG-AEU-001, WP-EAU-001, WP-EAU-003, WP-EAU-004, WP-EAU-005) Monitoring The permittee shall conduct an observation of the presence of visible emissions on exhaust stack of the emergency generator engine and emergency water pumps (EG-AEU-001 and WP-EAU-001 through WP-EAU-005) at least each quarter that the units are operated. If visible emissions are observed, the permittee shall take timely corrective actions such that the systems resume operation with no visible emissions, or perform a visible emission evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the systems do not exceed 20 percent opacity. The VEE shall be conducted for a minimum of six minutes. If compliance is not demonstrated by this VEE, timely corrective action shall be taken such that the systems resume operation with visible emissions of 20 percent or less. The permittee shall maintain an observation log to demonstrate compliance. The log shall include the date and time of the observations, whether or not there were visible emissions, any VEE recordings and any necessary corrective actions taken.

(9VAC5-80-110)

97. Fuel Burning Equipment Requirements - (emission unit ID #EG-AEU-001, WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005) - Recordkeeping - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with

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this permit. The content of and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:

- a. Results of all visible emissions observations and visible emissions evaluations required by Condition 95.
- b. Details of any corrective action taken as a result of these observations.

The above records must be kept for five years in hard copy or electronic format and must be readily accessible.

(9VAC5-80-110)

98. **Fuel Burning Equipment Requirements - (emission unit ID #EG-AEU-001, WP-EAU-001, WP-EAU-003, WP-EAU-004, WP-EAU-005) – Reporting** - The permittee shall report the results of any 40 CFR Part 60 Method 9 opacity test performed as a result of Condition 96. If the test indicates the facility is out of compliance with the standard contained in Condition 95 the source shall also report the length of time associated with any exceedance of the standard and the corrective actions taken to correct the exceedance. This report shall be sent to the Piedmont Regional Office within seven days of the applicable test. (9VAC5-80-110)

MACT SUBPART ZZZZ – NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES – (emission unit ID #EG-AEU-001, WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005)

- 99. MACT SUBPART ZZZZ (emission unit ID #WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005) Limitations The permittee shall operate the emergency water pumps (WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005) in compliance with all applicable requirements of 40 CFR 63, Subparts A and ZZZZ for emergency CI RICE. Table 8 to Subpart ZZZZ of Part 63 shows which parts of the General Provisions in 40 CFR 63.1 through 63.15 apply to the permittee. (9VAC5-80-110 and 40 CFR 63, Subparts A and ZZZZ)
- 100. MACT Subpart ZZZZ (emission unit ID#EG-AEU-001) Limitations The emergency generator engine (EG-AEU-001) is a new stationary emergency RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii). Therefore the engine does not have to meet the requirements of 40 CFR 63 Subparts A and ZZZZ, except for the initial notification requirements of 40 CFR 63.6645(f). (9VAC5-80-110 and 40 CFR 63.6590(b)(1)(ii))
- 101. MACT SUBPART ZZZZ (emission unit ID #WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005) Limitations As required by 40 CFR 63.6602 for an existing emergency stationary CI RICE located at a major source of HAP emissions, the facility shall, as a minimum:

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- a. Change oil and filter every 500 hours of operation or annually, whichever comes first;
- b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

The permittee has the option to utilize an oil analysis program as described in 40 CFR 63.6625(i) in order to extend the specified oil change requirement in Table 2c of Subpart ZZZZ. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2c of Subpart ZZZZ, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State, or local law under which the risk was deemed unacceptable. (9VAC5-80-110, 40 CFR 63.6602, and Table 2c of Subpart ZZZZ to Part 63)

- 102. MACT SUBPART ZZZZ (emission unit ID #WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005) Limitations Maintenance Plan The permittee shall operate and maintain the emergency water pumps according to the manufacturer's emission-related written instructions or develop their own maintenance plan which must provide for the maintenance and operation of the engines in a manner consistent with good air pollution control practices for minimizing emissions. Operators shall be trained on proper operation and maintenance of the engines. Determination of whether such operation and maintenance procedures being used are sufficient to minimize emissions will be based on available information which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (9VAC5-80-110, 40 CFR 63.6605(b), 40 CFR 63.6625(e)(2)), and 40 CFR 63.6640(a))
- 103. MACT SUBPART ZZZZ (emission unit ID #WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005) Limitations Non-Resettable Hour Meter The emergency water pumps shall each be equipped with a non-resettable hour meter.

  (9VAC5-80-110 and 40 CFR 63.6625(f))
- 104. MACT SUBPART ZZZZ (emission unit ID #WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005) Limitations Engine Startup The permittee shall minimize each emergency water pump's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. (9VAC5-80-110 and 40 CFR 63.6625(h))
- 105. MACT SUBPART ZZZZ (emission unit ID #WP-EAU-001, WP-EAU-002, WP-EAU-003, WP-EAU-004, WP-EAU-005)— Recordkeeping The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit, including all applicable operating limitations, work practice, and management practice standards found in National Emission

Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (Table 2c to MACT, Subpart ZZZZ). These records shall include but are not limited to:

- a. The reason for operation and hours of operation for each emergency water pump, including hours spent for non-emergency operation, calculated monthly as the sum of each consecutive 12-month period.
- b. Records of oil and filter changes and inspections of air cleaners, hoses, and belts, as they occur.
- c. The occurrence and duration of each malfunction of each emergency water pump.
- d. A log of actions taken during periods of malfunction to minimize emissions, including any corrective actions; all required maintenance performed on the emergency water pumps to demonstrate the unit was operated and maintained in accordance with the maintenance plan, including the required work practices included in Condition 102.

These records shall be kept in hard copy or electronic format for the most recent five years, and must be readily accessible for inspection by the DEQ. (9VAC5-80-110, 40 CFR 63.6655, and 40 CFR 63.6660)

# NSPS SUBPART IIII – STANDARDS OF PERFOMANCE FOR STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES – (emission unit ID #EG-AEU-001)

- 106. NSPS SUBPART IIII (emission unit ID #EG-AEU-001) Limitations Requirements by Reference Except where this permit is more restrictive than the applicable requirement, EG-AEU-001 shall be operated in compliance with all applicable requirements of NSPS IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The emission unit is considered an emergency stationary compression ignition engine as defined in 40 CFR 60.4219. (9VAC5-80-110 and 40 CFR 60, Subpart IIII)
- 107. NSPS SUBPART IIII (emission unit ID#EG-AEU-001) Limitations Emission Standards The emergency generator (EG-AEU-001) must be certified as meeting Tier II or Tier III standards for NOx+NMHC and CO and PM in Appendix I to 40 CFR Part 1039. The permittee shall operate and maintain the engine to meet the emission standards over the entire life of the engine. (9 VAC 5-80-110, 40 CFR 60.4205(b), and 40 CFR 60.4206)
- 108. **NSPS SUBPART IIII (emission unit ID #EG-AEU-001) Limitations Fuel Specifications** The permittee shall use diesel fuel for the emergency generator that meets the requirements of 40 CFR 1090.35 for ultra-low sulfur diesel (ULSD) fuel, with a sulfur content of no more than 0.0015% by weight. (9 VAC 5-80-110 and 40 CFR 60.4207(b))
- 109. NSPS SUBPART IIII (emission unit ID #EG-AEU-001) Limitations Non-Resettable Hour Meter The emergency generator shall be equipped with a non-resettable hour meter. (9VAC5-80-110 and 40 CFR 60.4209(a))

- 110. **NSPS SUBPART IIII (emission unit ID#EG-AEU-001) Limitations Hours of Operation** For emergency generator (EG-AEU-001), any operation other than emergency operation as specified in 40 CFR 60.4211(f)(1), maintenance and testing as specified in 40 CFR 60.4211(f)(2)(i), and operating in non-emergency situations for 50 hours per year, as specified in 40 CFR 60.4211(f)(3), shall be prohibited. (9 VAC 5-80-110 and 40 CFR 60.4211(f))
- 111. **NSPS SUBPART IIII (emission unit ID#EG-AEU-001) Limitations Maintenance Plan -** The permittee shall operate and maintain the emergency generator (EG-AEU-001) according to the manufacturer's emission-related written instructions or develop their own maintenance plan which must provide for the maintenance and operation of the generator in a manner consistent with good air pollution control practices for minimizing emissions. Operators shall be trained on proper operation and maintenance of the engine.

  (9 VAC 5-80-110 and 40 CFR 60.4211)
- 112. **NSPS SUBPART IIII (emission unit ID #EG-AEU-001) Monitoring** Compliance with the operational requirements in Condition 110 for the emergency generator shall be to keep a log of any emergency and non-emergency operating hours on a monthly basis. (9 VAC 5-80-110)
- 113. **NSPS SUBPART IIII (emission unit ID #EG-AEU-001) Recordkeeping** The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:
  - a. The reason for operation and hours of operation for the emergency engine, including hours spent for non-emergency operation, calculated monthly as the sum of each consecutive 12-month period.
  - b. Diesel shipments purchased, indicating sulfur content per shipment.
  - c. Engine information including make, model, serial number, model year, engine displacement, and maximum engine power (bhp).
  - d. The manufacturer's written operating instructions or procedures developed by the owner/operator that are approved by the engine manufacturer.
  - e. The occurrence and duration of each malfunction of the generator.
  - f. A log of actions taken during periods of malfunction to minimize emissions, including any corrective actions.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110)

#### **FACILITY WIDE CONDITIONS**

- 114. **Facility Wide Conditions Periodic Monitoring/Recordkeeping Maintenance -** The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:
  - a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
  - b. Maintain an inventory of spare parts.
  - c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
  - d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of the trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

- (9 VAC 5-80-110 and Condition 18 of the 2/24/06 Permit, Condition 13 of the 12/7/09 Permit, Condition 23 of the 4/20/20 Permit, Condition 20 of the 12/18/14 Permit, and Condition 15 of the 3/20/19 Permit)
- 115. **Facility Wide Conditions Testing -** The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
  - (9 VAC 5-80-110, 9 VAC 5-50-30 and Condition 5 of the 12/18/14 Permit)
- 116. **Facility Wide Conditions Testing** If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the appropriate test method(s) in accordance with procedures approved by the DEQ.

(9 VAC 5-80-110)

#### **INSIGNIFICANT EMISSION UNITS**

117. **Insignificant Emission Units** - The following emission units at the facility are identified in the application as insignificant emission units under 9VAC5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9VAC5-80-720B)	Rated Capacity (9VAC5-80-720C)
N/A	Used-Oil Storage Tanks	9 VAC 5-80-270 C		7 @ 275 gallons ea
EC T-40	Caustic Storage Tank	9 VAC 5-80-270 A		
EC T-41	Caustic Storage Tank	9 VAC 5-80-270 A		
EC T-59	Spent Caustic Tank	9 VAC 5-80-270 A		
EC T-58	Spent Caustic Tank	9 VAC 5-80-270 A		
EC T-55	Spent Caustic Tank	9 VAC 5-80-270 A		
EC T-54	Spent Caustic Tank	9 VAC 5-80-270 A		

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9VAC5-80-720B)	Rated Capacity (9VAC5-80-720C)
EC-TNK-335	Caustic Mix Tank	9 VAC 5-80-270 A	,	
EC-TNK-343	Caustic Storage Tank	9 VAC 5-80-270 A		
EC-TNK-306	Caustic Scale Tank	9 VAC 5-80-270 A		
EC-TNK-SC1	Caustic Collection Tank	9 VAC 5-80-270 A		
EC-TNK-324	Caustic Receiving Tank	9 VAC 5-80-270 A		
EC-TNK-351	Caustic Neutralization Tank	9 VAC 5-80-270 A		
EC-AEU-041	Liquid Carbon Dioxide Storage Tank	9 VAC 5-80-270 A		
CM T-801	Caustic Storage Tank	9 VAC 5-80-270 A		
CM T-802	Caustic Storage Tank	9 VAC 5-80-270 A		
CM PER 1	North Hydrogen Peroxide Storage Tank	9 VAC 5-80-270 A		
CM PER 2	South Hydrogen Peroxide Storage Tank	9 VAC 5-80-270 A		
NA-TNK-300	Nitric Acid Storage Tank	9 VAC 5-80-270 A		
NA-TNK-313	Caustic Storage Tank	9 VAC 5-80-270 A		
NA-TNK-363	Caustic Storage Tank	9 VAC 5-80-270 A		
NA-AEU-098 and 099	Caustic Scale Tanks	9 VAC 5-80-270 A		
NA-TNK-339	Hydrogen Peroxide Storage Tank	9 VAC 5-80-270 A		
KL-TNK-362	Caustic Scale Tank	9 VAC 5-80-270 A		
KL-TNK-365	Caustic Storage Tank	9 VAC 5-80-270 A		
KL-TNK-366	Hydrogen Peroxide Storage Tank	9 VAC 5-80-270 A		
KL-TNK-368	Hydrogen Peroxide Storage Tank	9 VAC 5-80-270 A		
KL-TNK-350	Hydrogen Peroxide Storage Tank	9 VAC 5-80-270 A		
FP-AEU-001	#1 Mix Tank	9 VAC 5-80-270 B	PM/PM <sub>10</sub> /VOC	
FP-AEU-002	#2 Mix Tank	9 VAC 5-80-270 B	PM/PM <sub>10</sub> /VOC	
FP-AEU-003	Bag Dump Station and Conveyance System	9 VAC 5-80-270 B	PM/PM <sub>10</sub> /VOC	
FP-AEU-004	Hydrogen Peroxide Tank	9 VAC 5-80-270 A		
FP-AEU-005	Hydrogen Peroxide Tank	9 VAC 5-80-270 A		
FP-AEU-006	Peroxide Head Tank	9 VAC 5-80-270 A		
FP-AEU-007	Process Storage Tank #3	9 VAC 5-80-270 B	PM/PM <sub>10</sub> /VOC	
FP-AEU-008	Process Storage Tank #4	9 VAC 5-80-270 B	PM/PM <sub>10</sub> /VOC	
FP-AEU-009	Process Storage Tank #6	9 VAC 5-80-270 B	PM/PM <sub>10</sub> /VOC	
FP-AEU-010	Mineral Oil Storage Tank #1	9 VAC 5-80-270 B	PM/PM <sub>10</sub> /VOC	
FP-AEU-011	Mineral Oil Storage Tank #2	9 VAC 5-80-270 B	PM/PM <sub>10</sub> /VOC	
N/A	Diesel Fuel Storage Tanks	9 VAC 5-80-270 B	VOC/HAP	4@275 gallons ea 1@ 500 gallons
N/A	Gasoline Storage Tank	9 VAC 5-80-270 B	VOC/HAP	1000 gallons

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9VAC5-80-110. (9VAC5-80-110)

## PERMIT SHIELD & INAPPLICABLE REQUIREMENTS

118. **Permit Shield & Inapplicable Requirements -** Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
40 CFR 60 (NSPS),	Standards of Performance for Volatile	The Hopewell facility does not have any
Subpart Kb	Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	storage tanks constructed, reconstructed, or modified after the applicability date that meet the size and vapor applicability thresholds of NSPS Subpart Kb.
40 CFR 60 (NSPS),	Standards of Performance for Equipment	The facility does not produce any of the
Subpart VV	Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction or Modification Commenced After January 5, 1981, and on or Before November 7, 2006	chemicals listed in 40 CFR 60.489 as an intermediates or final products.
40 CFR 60 (NSPS), Subpart III	Standards of Performance for VOC Emissions from the SOCMI Air Oxidation Unit Processes	The facility does not produce any of the chemicals listed in 40 CFR 60.617 as a product, co-product, by-product, or intermediate.
40 CF 60 (NSPS),	Standards of Performance for VOC	The facility does not produce any of the
Subpart NNN	Emissions from the SOCMI Distillation Operations	chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate.
40 CFR 60 (NSPS),	Standards of Performance for VOC	The facility does not produce any of the
Subpart RRR	Emissions from the SOCMI Reactor Processes	chemicals listed in 40 CFR 60.707 as a product, co-product, by-product, or intermediate.
40 CFR 60 (NSPS), Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	The emergency water pumps (WP-EAU-001 through 005) at the facility were constructed prior to the applicability date
40 CFR 63 (MACT), Subpart VVV	National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works	Wastewater from the facility is sent to Hopewell Water Renewal for treatment.
40 CFR 63 (MACT), Subpart EEEE	National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)	The facility stores organic HAP liquids listed in Table 1 of Subpart EEEE (methanol). However, the organic liquid distribution operations, which include storage tanks and equipment leak components, are subject to Subpart UUUU. Therefore, these emissions units are not subject to MACT Subpart EEEE in accordance with the exemption in 40 CFR 63.2338(c)(1).
40 CFR 63 (MACT), Subpart FFFF	National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing	The facility is subject to MACT Subpart UUUU. Therefore, it is exempt from MACT Subpart FFFF according to 40 CFR 63.2435(b)(3).

Citation	Title of Citation	Description of Applicability
9VAC5, Chapter 40,	9VAC5, Chapter 40	Rule 4-8 does not apply to the emergency
Article 8 (Rule 4-8)	(Existing Stationary Sources)	engines, since they are stationary internal
	Emission Standards for Fuel Burning	combustion engines.
	Equipment (Rule- 4-8)	
9VAC5, Chapter 40,	9VAC5, Chapter 40	Rule 4-25 does not apply to the storage tanks
Article 25	(Existing Stationary Sources)	listed as Insignificant Emission Units (by size
(Rule 4-25)	Emission Standards for Volatile Organic	and/or vapor pressure)
	Compound Storage and Transfer	
	Operations (Rule- 4-25)	

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law. (9VAC5-80-110 and 9VAC5-80-140)

#### **GENERAL CONDITIONS**

119. **General Conditions - Federal Enforceability** - All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable. (9VAC5-80-110)

#### 120. General Conditions - Permit Expiration

- a. This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9VAC5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
- b. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
- c. If an applicant submits a timely and complete application for an initial permit or renewal under 9VAC5-80-80 F, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9VAC5 Chapter 80, until the Board takes final action on the application under 9VAC5-80-150.
- d. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9VAC5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9VAC5 Chapter 80.
- e. If an applicant submits a timely and complete application under section 9VAC5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or

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denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9VAC5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

f. The protection under subsections F 1 and F 5 (ii) of section 9VAC5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9VAC5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9VAC5-80-80, 9VAC5-80-110 and 9VAC5-80-170)

- 121. **General Conditions -Recordkeeping and Reporting -** All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
  - a. The date, place as defined in the permit, and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of such analyses; and
  - f. The operating conditions existing at the time of sampling or measurement.

(9VAC5-80-110)

122. General Conditions -Recordkeeping and Reporting - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. (9VAC5-80-110)

- 123. **General Conditions -Recordkeeping and Reporting -** The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:
  - a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31; and
  - b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:

- c. Exceedances of emissions limitations or operational restrictions;
- d. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring or periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,
- e. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semiannual reporting period. (9VAC5-80-110)

- 124. **General Conditions Annual Compliance Certification -** Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:
  - a. The time period included in the certification. The time period to be addressed is January 1 to December 31;
  - b. The identification of each term or condition of the permit that is the basis of the certification;
  - c. The compliance status;
  - d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;
  - e. Consistent with subsection 9VAC5-80-110, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;
  - f. Such other facts as the permit may require to determine the compliance status of the source; and
  - g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3\_APD\_Permits@epa.gov

(9VAC5-80-110)

125. **General Conditions - Permit Deviation Reporting -** The permittee shall notify the Piedmont Regional Office within four daytime business hours after discovery of any deviations from permit requirements

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which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semiannual compliance monitoring report pursuant to Condition 123 of this permit. (9VAC5-80-110 F. 2)

- 126. **General Conditions Failure/Malfunction Reporting** In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall no later than four daytime business hours after the malfunction is discovered, notify the Piedmont Regional Office such failure or malfunction and within 14 days provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Piedmont Regional Office.

  (9VAC5-80-110 and 9VAC5-20-180)
- 127. **General Conditions Failure/Malfunction Reporting -** The emission units that have continuous monitors subject to 9VAC5-40-50 C and 9VAC5-50-50 C are not subject to the 14 day written notification.

(9VAC5-80-110 and 9VAC5-20-180)

- 128. **General Conditions Failure/Malfunction Reporting** Each owner required to install a continuous monitoring system (CMS) or monitoring device subject to 9VAC5-40-41 or 9VAC5-50-410 shall submit a written report of excess emissions (as defined in the applicable subpart in 9VAC5-50-410) and either a monitoring systems performance report or a summary report form, or both, to the board semiannually. All reports shall include the following information:
  - a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9VAC5-40-41 B.6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;
  - b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;
  - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and
  - d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

All malfunctions of emission units not subject to 9VAC5-40-50 C and 9VAC5-50-50 C require written reports within 14 days of the discovery of the malfunction. (9VAC5-80-110 and 9VAC5-20-180 C)

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- 129. **General Conditions Severability** The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit. (9VAC5-80-110)
- 130. **General Conditions Duty to Comply -** The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application. (9VAC5-80-110)
- 131. **General Conditions Need to Halt or Reduce Activity not a Defense** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (9VAC5-80-110)
- 132. **General Conditions Permit Modification -** A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9VAC5-80-50, 9VAC5-80-1100, 9VAC5-80-1605, or 9VAC5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios. (9VAC80-110, 9VAC5-80-190, and 9VAC5-80-260)
- 133. General Conditions Property Rights The permit does not convey any property rights of any sort, or any exclusive privilege. (9VAC5-80-110)
- 134. **General Conditions Duty to Submit Information -** The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality. (9VAC5-80-110)
- 135. **General Conditions Duty to Submit Information -** Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9VAC5-80-80 G. (9VAC5-80-110)
- 136. **General Conditions Duty to Pay Permit Fees** The owner of any source for which a permit was issued under 9VAC5-80-50 through 9VAC5-80-300 shall pay annual emissions fees, as applicable, consistent with the requirements of 9VAC5-80-310 through 9VAC5-80-350 and annual maintenance fees, as applicable, consistent with the requirements of 9VAC5-80-2310 through 9VAC5-80-2350. (9VAC5-80-110, 9VAC5-80-310 et seq., and 9VAC5-80-2310 et seq.)
- 137. **General Conditions Fugitive Dust Emission Standards -** During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any

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materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

- a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
- b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
- c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;
- d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
- e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9VAC5-80-110 and 9VAC5-50-90)

- 138. **General Conditions Startup, Shutdown, and Malfunction -** At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

  (9VAC5-80-110 and 9VAC5-50-20 E)
- 139. **General Conditions Alternative Operating Scenarios -** Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9VAC5 Chapter 80, Article 1. (9VAC5-80-110)
- 140. **General Conditions Inspection and Entry Requirements** The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:
  - a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

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- b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
- c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
- d. Sample or monitor at reasonable times' substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9VAC5-80-110)

- 141. **General Conditions Reopening for Cause -** The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9VAC5-80-80 F. The conditions for reopening a permit are as follows:
  - a. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
  - b. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
  - c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9VAC5-80-110 D.

(9VAC5-80-110)

142. **General Conditions - Permit Availability -** Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request. (9VAC5-80-110 and 9VAC5-80-150)

#### 143. General Conditions - Transfer of Permits

- a. No person shall transfer a permit from one location to another, unless authorized under 9VAC5-80-130, or from one piece of equipment to another.
- b. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9VAC5-80-200.

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c. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9VAC5-80-200.

(9VAC5-80-110 and 9VAC5-80-160)

144. **General Conditions - Permit Revocation or Termination for Cause** - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9VAC5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.

(9VAC5-80-110, 9VAC5-80-190 C, and 9VAC5-80-260)

145. General Conditions - Duty to Supplement or Correct Application - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.

(9VAC5-80-110 and 9VAC5-80-80 E)

146. **General Conditions - Stratospheric Ozone Protection -** If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F. (9VAC5-80-110 and 40 CFR Part 82)

147. **General Conditions - Asbestos Requirements -** The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).

(9VAC5-60-70 and 9VAC5-80-110)

- 148. **General Conditions Accidental Release Prevention -** If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68. (9VAC5-80-110 and 40 CFR Part 68)
- 149. **General Conditions Changes to Permits for Emissions Trading** No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit. (9VAC5-80-110)

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- 150. **General Conditions Emissions Trading -** Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:
  - a. All terms and conditions required under 9VAC5-80-110, except subsection N, shall be included to determine compliance.
  - b. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
  - c. The owner shall meet all applicable requirements including the requirements of 9VAC5-80-50 through 9VAC5-80-300.

(9VAC5-80-110)